

JPRS-UEA-89-031  
15 SEPTEMBER 1989

FOREIGN  
BROADCAST  
INFORMATION  
SERVICE

# ***JPRS Report—***

# **Soviet Union**

## ***Economic Affairs***

**19980123 119**

**DTIC QUALITY INSPECTED 3**

REPRODUCED BY  
U.S. DEPARTMENT OF COMMERCE  
NATIONAL TECHNICAL INFORMATION SERVICE  
SPRINGFIELD, VA. 22161

**DISTRIBUTION STATEMENT A**

**Approved for public release;  
Distribution Unlimited**

# Soviet Union

## Economic Affairs

JPRS-UEA-89-031

### CONTENTS

15 SEPTEMBER 1989

#### NATIONAL ECONOMY

##### INVESTMENT, PRICES, BUDGET, FINANCE

- Bank's Interest Rates, Disregard for Inflation Hit [M. Berger; *IZVESTIYA*, 23 Aug 89] ..... 1

##### INDUSTRIAL DEVELOPMENT, PERFORMANCE

- Problems of Defining, Analyzing Nature of Conversion [A. Kireyev; *OGONEK* No 27, Jul 89] ..... 2  
Conversion: Lower Profit, Higher Investment at Kuybyshev Plant  
[V. Ulyanov; *EKONOMICHESKAYA GAZETA* No 30, Jul 89] ..... 9  
Azerbaijan Gosplan Chief Interviewed On Defense Conversion  
[A. Gadzhiyev; *BAKINSKIY RABOCHIY*, 4 Jun 89] ..... 10

#### REGIONAL DEVELOPMENT

- Decentralized Management Requires New Territorial-Administrative Units  
[N. Agafonov, et al; *IZVESTIYA*, 23 Aug 89] ..... 11  
LaSSR Economic Autonomy Plan Criticized ..... 13  
Goals Linked to National Ideology  
[A. Malinkovskiy; *SOVETSKAYA LATVIYA*, 12, 13 Jul 89] ..... 13  
Foundation of Plan Called 'Shaky' ..... 15  
Society of Lithuanian Manufacturers Holds Congress  
[V. Yefimov; *SOVETSKAYA LITVA*, 12 Jul 89] ..... 19

#### AGRICULTURE

##### AGRO-ECONOMICS, POLICY, ORGANIZATION

- Restructuring Socialist Relations in Countryside [N.G. Kopanev; *SELSKAYA ZHIZN*, 22 Jul 89] .. 20  
Tula Obkom First Secretary on Agricultural Leasing [Yu. Litvintsev; *TRUD*, 9 Aug 89] ..... 26

##### MAJOR CROP PROGRESS, WEATHER REPORTS

- Lack of Preparation, Interest in Grain Harvest Hit [*PRAVDA*, 22 Jul 89] ..... 28

#### AGROTECHNOLOGY

- Biotechnology Applications Viewed by VASKhNIL Academics  
[V. Shevelukha, L. Ernst; *SELSKAYA ZHIZN*, 1 Aug 89] ..... 29

#### FORESTRY, TIMBER

- State Committee on Forestry Meeting Discusses Future Tasks  
[I. Gurova, et al; *LESNAYA PROMYSHLENNOST*, 21 Jan 89] ..... 32

#### CONSTRUCTION

##### POLICY, ORGANIZATION

- Importance of Construction Price Restructuring Stressed  
[A. Yezhov; *EKONOMICHESKIYE NAUKI* No 7, Jul 89] ..... 37  
Gosstroy Ruling on Nonstandard Building Plans Viewed [A. Blokhin; *IZVESTIYA*, 25 Aug 89] .... 40

**CONSUMER GOODS, DOMESTIC TRADE**

**GOODS PRODUCTION, DISTRIBUTION**

- Consumer Protection Group's Problems in Tyumen Discussed  
[Yu. Perepletkin; *IZVESTIYA*, 11 Jul 89] ..... 42

**HOUSING, PERSONAL SERVICES**

- People's Control Committee Evaluates Housing Program [AGITATOR No 14, Jul 89] ..... 43

**ENERGY**

**ELECTRIC POWER GENERATION**

- Training Course for IAEA Inspectors at Novovoronezh AES  
[A. Pavlov; *SOTSIALISTICHESKAYA INDUSTRIYA*, 10 Sep 89] ..... 44

**LABOR**

- Productivity, Wages in Co-op, State Sectors Compared  
[K. Kagalovskiy, L. Valdman; *IZVESTIYA*, 8 Aug 89] ..... 45  
Weaknesses in Trade Union Draft Law Noted [Yu. Shcheglov; *TRUD*, 5 Aug 89] ..... 46  
Rethinking Unemployment, Social Justice [S. Yershov; *LITERATURNAYA GAZETA*, 2 Aug 89] ... 47

**MACHINE BUILDING**

**ORGANIZATION, PLANNING, MANAGEMENT**

- Minister Explains Problems in Domestic Machine Tool Production  
[N.A. Panichev; *SOVETSKAYA ROSSIYA*, 25 Aug 89] ..... 52  
Machinebuilding Sector's Problems Analyzed, Solutions Proposed  
[S.A. Kheynman; *EKONOMIKA I MATEMATICHESKIYE METODY* No 3, May-Jun 89] ..... 55

**TRANSPORTATION**

**RAIL SYSTEMS**

- Railway Communications Installation Detailed  
[N. S. Shilling; *TRANSPORTNOYE STROITELSTVO* No 7, Jul 89] ..... 62

## INVESTMENT, PRICES, BUDGET, FINANCE

### Bank's Interest Rates, Disregard for Inflation Hit

18200447 Moscow *IZVESTIYA* in Russian

23 Aug 89 Morning Edition p 3

[Article by M. Berger: "Who Owes Whom, or The Banker's View of Personal Savings"]

[Text] Officially at least, we have had a unique attitude towards personal savings. In general, it somehow does not seem worthy of a Soviet citizen to have a large account in a savings bank. The canonization of moneylessness has had results which are not half bad. According to the wealth pyramid constructed by the economist A. Zaychenko, rich people here, with our very distant approximation of world consumption standards, total 2.3 percent of all families, those of average means—11.2 percent, and poor—86.5 percent. According to his data, in the developed countries the percentage of average income families is about 6 times higher than here, while in the GDR, Czechoslovakia and Hungary, it is about 4 times higher.

In spite of this, many enthusiasts and devotees of "egalitarian poverty," and some lecturers and propagandists and officials as well, speak about the sum total of contributions to savings books as if they had caught some dangerous individuals in an attempt to steal 300 billion rubles from the national economy. Naturally, the most fervent suggest that at least some of this money should be expropriated through a money reform or some other method. Letters with such suggestions, and there are more than enough of them, stress two of our preferred activities: take and divide, take and divide... These are much preferred to producing and increasing social and personal wealth. Incidentally, this partiality was noted long ago by Saltykov-Shchedrin: "I know that many think as follows: We are poor; consequently, we put first priority upon distributing wealth. However, in my opinion, these are merely words. There is absolutely no distribution of wealth here; more importantly, there is no accumulation of wealth. There is simple and naked plundering." However, this is a completely different subject. Let us return to savings, which we so often deplore and which specialists and enthusiasts so eagerly encroach upon.

Savings per capita do not exceed one-fifth of average monthly salary; this cannot be considered excessive or dangerous. Also, the savers are not at fault; there is nothing to spend their money on, otherwise the total would undoubtedly be much lower. Finally, it is a sin to complain about the growth in savings but to extensively use them at one's own discretion. Those who are now aware that financial organs use the billions accumulated in the Sberbank, should read the interview with A. Burkov, chairman of this bank's board published in *EKONOMICHESKAYA GAZETA* (No. 34). The chairman reports: "During the past 1.5 years about 45

billion rubles flowed into the bank. This substantially eased difficulties in currency circulation and eliminated the need to issue currency."

In general, there is nothing terrible about the state using the resources of Sberbank, that is my and your money, for its various needs and, more importantly, to reach the important goal of restricting the issuing of money. This partially exonerates those who put their money in savings banks.

Unfortunately, A. Burkov says nothing about the conditions under which the state uses money entrusted to Sberbank. Gosbank takes this money for practically nothing and uses it for credit to industry, principally heavy industry. Naturally this aggravates inflation. Sberbank, with the largest credit resources, cannot offer anything for sale to other banks on a basis advantageous to itself. These resources are "credited" and included in the credit plan by Gosbank.

Yes, the state is our own and we are vitally concerned that it fare as well as possible. However, the ability to dispose of citizens' property, their savings accounts in Sberbank, will be of no use; the budget deficit is huge and is not being reduced, currency issues exceed all plans and calculations. I am convinced that if Gosbank had to pay for each ruble it temporarily took from Sberbank, if there were a previously agreed upon price for each billion, then the state budget and its deficit would look quite different.

Also, an equitable payment for money would earn profits for Sberbank, help it materially; this would mean improvements in the quality of service.

Judging from the fact that in his interview the chairman of the Sberbank board did not even mention the need to reexamine the existing relationship between the bank and the state budget and changes in the state's approach to its financial obligations, he does not see anything reprehensible about what is now essentially a "noncommodity" approach to depositors' money.

All this causes one to doubt that Sberbank places first priority upon clients' interests, that it is really a bank for the people as was stated in the introduction to the interview. In its present form, Sberbank is a classic treasury institution, considered by Minfin [Ministry of Finance] to be an organic part of the treasury, and not a bank, concerned about its clients.

Banking operations in our country are organized so that nobody has to be at all concerned about such things. Clients, that is you and I, simply have no place to go, we are condemned to Sberbank. All other banks, including commercial ones, are forbidden to conduct business directly with the public. So, like it or not, we have to go to Sberbank, which, as they assure us, has the world's largest staff (230,000 people) and network of branches. It is impossible to understand what there is to be proud of—their degree of monopoly?

The problem of selecting a way to save money is thus as simple as possible for us: either put it in Sberbank or in a piggy bank. There can thus be no really serious concern about attracting depositors through expanded quantity and quality of services and higher interest rates.

Now a few words about interest rates for deposits. In answering the question as to whether interest payments are a violation of social justice, the manager of Sberbank, which pays record low interest, did not say a word about the absurdity of posing the question in this manner. True, nothing was said in support of this viewpoint, and one should be thankful for that. However, in discussing interest payments, A. Burkov comments: "One must not forget that depositing money in Sberbank relieves citizens of concern about the security of their savings." Do you sense where things are heading? "This," continues the chairman, "sometimes gives rise to proposals that citizens pay the saving banks for the service of holding their money."

A brilliant ploy. The discussion is no longer about what would be an equitable payment to clients for their commodity—money—but about how much could be extracted from them for keeping it. This is not a bank, but some kind of pawnshop. True, it is phrased so that it is not clear who nurtures this idea. However, I dare say that nobody has to be convinced that the depositors have an alibi on this score. The bank has a real reason to so test the waters for freeing growth in the wage fund of its workers from progressive taxation. After all, in accordance with a recent USSR Supreme Soviet decree, services are not taxed in this manner. No matter what, as long as we have money to save we will try to find out how much we will be paid for it. As A. Burkov reports, last year USSR Sberbank paid 6.7 billion rubles in interest. This money became part of the public's income.

It turns out that Sberbank pays rather easy money to our savers. We will not dwell on these sums losing their magical multibillion luster when they are divided among millions of clients. Two to 2.5 rubles per hundred annually, the amount paid by Sberbank, is, of course, "fabulous" income. To estimate its size, we turn to another thesis advanced by the Sberbank manager in this same interview. "We should also remember," he stressed, "that in several countries depositors are compensated for the decline in the purchasing power of their deposits, as expressed by the official rate of inflation."

This is very accurate, although it would be more accurate to formulate it differently. In a very limited number of countries where inflation is not officially recognized or its rates calculated (in addition to us, this includes the GDR, for example), it does not influence the interest rate paid on deposits. In the overwhelming majority of countries the inflation rate is very important because if interest on deposits is lower, then a few will wish to deposit money in the bank, and it will risk ruin. The bank in Poland analogous to our Sberbank pays an annual rate of several dozen percent! In our country, of

course, inflation has not reached Polish levels; nevertheless, it does exist, and is more than 2 or 3 percent. According to calculations by the Economics Scientific Research Institute at USSR Gosplan (published recently in *EKONOMICHESKAYA GAZETA*) the annual rate is about 8.5 percent. This, of course, is the most cautious estimate. This year its pace has undoubtedly increased.

Thus, clients annually pay Sberbank about 6 rubles per hundred deposited, for their deposits depreciate by 8-9 percent annually, while they only receive 2 or 3 percent.

This is the answer to the question about the social justice and "unearned" nature of interest income.

The Sberbank manager proposes a most unique methodology for calculating interest rates. The organization of currency circulation requires sizable expenditures. The expansion of non-cash turnover through incentives to save reduces these expenditures. A. Burkov concludes: "Interest rates should be within the difference in expenditures for currency and for bank money turnover."

In short, the inflation rate, economic and credit market conditions mean nothing. The main factor determining the interest rates on deposits is bankers' zeal to economize during the transition from currency to bank money turnover. But what if there are no economies here, then what? It is difficult to call this approach commercial or economic. This is rather an administrative-warehouse approach to the problem of deposits. One can hardly expect that the path Sberbank plans to take will be effective in improving money circulation in the country, in curbing inflation; that is, in improving the quality of life. This is unfortunate, as practically every family must use its services in some way or other.

## INDUSTRIAL DEVELOPMENT, PERFORMANCE

### Problems of Defining, Analyzing Nature of Conversion

*18010869 Moscow OGONEK in Russian  
No 27, Jul 89 pp 6-7, 26-27*

[Article by A. Kireyev, candidate of economic sciences, in the column: "Perestroika—Test by Deed": "Conversion to Economic Accountability"; first paragraph is OGONEK introduction]

[Text] For a long time economic phenomena were known to us only in theory. Inflation, budget deficits, and a national debt were attributes of "their" economy. They became "ours" only recently. We must add to this very incomplete list the word "conversion"—a term still not familiar to all of us. In its broadest sense it signifies the process of reorienting society's creative forces involved with the country's defense effort toward the

realization of peaceful purposes. Conversion presupposes effecting changes in the military, political, economic, and ideological sectors as they relate to demilitarization of all aspects of social life.

The problem of conversion in all its poignancy was presented at the Congress of People's Deputies. The delegates saw conversion of a portion of the military potential to peaceful purposes as one of a small number of realistic ways to bring the country out of the highly critical economic situation. Blatant socio-economic contradictions that have existed for years are forcing us to adopt extraordinary measures. It is high time that the state take action to compensate the handicapped and the elderly, who are receiving miserably small pensions. Tomorrow they will no longer need this money. The state must act now to provide goods to the half-empty consumer market, since people are no longer willing to accept promises and "plans to the year 2000."

Conversion is one of the few realistic possibilities of increasing the availability of goods today, something which would provide at least a partial balance in the devastated market. However, to bring this about it is necessary to acquire a clear understanding of the nature of conversion, the kind of planning required for its realization, and the purposes to which the released potential is to be put.

To supply answers to the above questions, we must know as a minimum the scale of our defense potential, the portion of the latter we can sacrifice without jeopardizing the country's defensive capability, and the kinds of socio-economic problems this will be capable of resolving.

In spite of glasnost, which has finally entered this delicate sector at great pains, it is still very difficult to provide exact answers. We have residual effects of the past, whereby the information necessary for intelligent analysis was withheld not only from enemies, but also from our own researchers. What do we know now?

We know that Soviet military expenditures for 1989 amount to 77.3 billion rubles or about 9 percent of the gross national product. This is substantially greater than the corresponding amount spent by all the capitalist countries that are leaders in the military sense. For the next two years, reduction in defense expenditures relative to the five-year plan are expected to result in a savings of almost 30 billion rubles.

We know that the manpower level of the Soviet Armed Forces as of 1 January 1989 is 4,258,000 men. The unilateral reduction will lower the total strength to approximately 3,760,000 men by the end of 1990.

We know that a program of production and development of new consumer goods by the defense industry for the 1989-1995 period has been devised. This program calls for tooling for the production of more than 140 types of domestic appliances.

Are the above data sufficient to make an adequate analysis of the conversion problem? Scientists do not know the scale and structure of Soviet military production. The announced reduction of 19.5 percent in production of armaments and combat materiel immediately raises the question of the particular sum from which this amount is being taken. If this is a question of a reduction in output (or purchases) of combat equipment in the amount of one-fifth, then we are speaking of a large-scale conversion of military-industrial potential.

There has been no public announcement of a definite plan setting forth the manner of utilizing the combat equipment, for which a sum of one billion in people's monies would not begin to cover the cost. Finally, we still do not know the age and professional structure of the 12-percent strength reduction, and it is virtually impossible to predict how this reduction will affect the labor market and to what extent the social guarantees are backed up materially for those released from the Army.

Thus, the conversion process under way consists of three major aspects. First, there is the cessation or redirection of military production effort. Second, there is the reduction in stockpiled armaments. Finally, there is reemployment and retraining of people discharged from the Armed Forces or from military enterprises.

Relative to Soviet military production, judging from the weight of the costs of acquisition of armaments and equipment, the NIOKR [scientific research and experimental design work] of a military nature, and military construction, which in 1989 comprises about three-fourths of all military expenditures, the amounts are more than considerable. Information published in the Soviet press indicates that the purely military expenditures are augmented by outwardly civilian ministries. In this connection, it is paradoxical that civilian production and consumer goods counted in the output of the Ministry of the Aircraft Industry amount to 35.8 percent, while by 1990 it is planned to increase their share to 41 percent. While civilian production of shipbuilders accounts for 42 percent of the sector's output, for next year it is planned to increase it to half of total output.

This means that in reality there is a strong trend toward militarization of civilian production sectors, which are returning to their initial functions as conversion is set into motion. However, on the other hand, under the conditions of many years' standing whereby the state did not spare any expense for the military, making available to the military sector the best the country had to offer—personnel, raw materials, technology—this sector made a substantial leap forward to leave the rest of the economy a great distance behind.

The following is a characterization of the Soviet military industry by the American researchers L. Brown and W. Chandler, who ordinarily are not prone to complimenting us: "It is ironic that arms production is the sole competitive sector of the Soviet economy. By concentrating its efforts on the production of weapons and

combat equipment to the detriment of other industries, the Soviet Union is capable of carrying out military production plans and maintaining quality standards, but it does this at the expense of adversely affecting the mechanism controlling the civilian industries."

At the level of conventional wisdom, such a situation is evaluated by a statement such as: "How is it that we are flying in space, but we cannot make a simple iron for pressing clothes!?" People become familiar with the names of "defense" academicians, laureates and heroes mainly from obituaries. Enormous industrial enterprises that are there for all to see have no signs. Maps do not show "concrete-reinforced roads" (betonki) nor often entire towns.

However, that is often only the tip of the iceberg. The main thing is that the Soviet economy has split into two separate parts. The military part is smaller but possesses the best. The civilian part is larger but must be satisfied with what is left. We are setting ourselves the task of merging with the world economy, but we must first merge our own economy by integrating the two parts into one whole. Failing this, this whole will continue to drag out a miserable existence. We can do this by means of conversion, which will break down the interdepartmental walls to provide the stagnant civilian industries with material and technological rejuvenation from the military.

It seems that we are beginning to understand this simple truth, which is the basis of the economic development of the entire advanced world. The more than 100 new materials, 240 technological processes, and 130 types of progressive equipment announced as created in the process of building the Energiya-Buran system will be used in shipbuilding, medicine, and other sectors of the economy. It will be fortunate if no secrecy barriers arise when matters progress to the point of employing them in civilian enterprises.

There remains the unanswered question of which goods are to be manufactured in the realignment of military production. This problem is of prime importance, since the struggle against the highly serious financial crisis gripping our economy should be waged primarily in the production area, by increasing the output of goods, not only in the financial area (by reducing state expenditures, subsidies, currency emission, etc.).

The point is that a ruble is not a ruble; it amounts to several kopeks, for it is not backed up by goods in the marketplace. The savings accumulated by the people exceed by five times the reserves of material valuables and goods reserves. Converted currency is said to be hard because its possession is a guarantee of acquiring goods that are in considerably larger supply in the marketplace than money. Hence two types of crises: the crisis of overproduction in their countries and the crisis of underproduction in our country. There can be no real increase in goods production, regardless of how much we reduce expenditures to balance the budget.

This means that the emphasis must be on forced increases in production which would outpace the growth in amount of money available, thus rendering the ruble sounder with every passing year. Conversion can help to increase the growth in goods output, but of which goods?

The West sought an answer to the above question for an excruciatingly long period of time. This was the reason for their building econometric conversion models: to evaluate possible positive and negative consequences of conversion. We gave our answer without hesitating: Force the military enterprises to produce the products that we wish them to produce, not the products they are already set up for by virtue of their equipment, technologies, production experience, and intellectual resources. Here and there in central publications there were interviews with military leaders who spoke of how defense industries were ready to assist civilian industries.

It has come to light that the Minoboronprom [Ministry of the Defense Industry], which instead of the respective ministries already was producing purely civilian items, from motor vehicles to cameras, was additionally tasked with the development and production of production lines for processing cattle and poultry, the manufacture of ice cream, the making of packaging materials, and the output of equipment for breweries and the soft drink industry—something that is not customary to the ministry's traditional product line. The Minoboronprom will undertake the manufacture of refrigeration equipment, while the design offices of the Minaviaprom [Ministry of the Aviation Industry], which are charged with the development of new airliners, will take on the task of developing machines for the fruit and vegetable industry.

The sad state of the light and food industry is beyond description. The millions in losses to the Soviet economy caused by agricultural spoilage associated with outmoded conditions of storage and processing constitute an extremely heavy burden. In this connection, we will impose an even heavier burden on the next generation if we allow the conversion standards to degrade the few high-technology military production processes to the medium union level, which for a good 10 years has lagged behind the technological level of the industrially advanced nations.

In working for today, we must not forget about the future. The enterprises that created the Buran and Energiya are capable of grinding out metal beds good enough to sleep in for a few nights, of course. However, sooner or later we may wake up to discover to our surprise that many countries that are thought of as emerging—not only the developed world—will already be in the next millennium technologically speaking, while we will remain in our squeaky bed.

Therefore, I am of the opinion that military enterprises should be realigned with full consideration of their pre-conversion product line. Render unto Caesar the things that are Caesar's. The Minaviaprom and the

Minsudprom [Ministry of the Shipbuilding Industry] have enough to do in their domains. If they can insure that aircraft will not crash and submarines hopefully will not sink, that is all that we can ask as far as conversion is concerned.

Conversion is applicable where civilian production is organized as a replacement for, not a concomitant of, military production. It is not always advantageous to expand the consumer product line which a military enterprise produces before conversion is effected. In most cases this has to do with low-technology goods that were foisted on them. For example, the recently declassified Caspian Mining and Metallurgical Combine of the Minsredmash [Ministry of Medium Machinery Manufacture], which among other things was previously involved with the mining and beneficiation of uranium, is already producing about 1,500 consumer items—from spare parts for motor vehicles to facing tile.

What are we to produce instead of reactor fuel, the demand for which is abating due to people's resistance to plans for nuclear power plant construction? In a similar enterprise, for example, plans call for organizing the production of high-purity materials for use in microelectronics and circuits. This particular enterprise was not mentioned by PRAVDA, even though the article published under the rubric "Top Secret" was apparently written to convince the reader that there are no more secrets in this area.

One thing is clear: Conversion effected under conditions of economic accountability must not bring about any decrease in profitability of work nor necessitate a step-down from complex and technologically demanding production operations to rudimentary and uncomplicated activity. This can trigger a drop in value of the product line, which will lead to a reduction in social level of the workers, with this in turn causing gravitation of trained workers to a more complex and highly-paid activity. The end result will be suffering on the part of the consumer, since even if we do have enough metal beds and beer will be offered for sale on every street corner, you can be sure that there will be a shortage of personal computers, an absence of which renders existence as a part of the civilized world unthinkable.

Another conversion problem of no less importance is devising an economical way to dispose of the enormous amounts of combat materiel that is to be eliminated either in the unilateral initiative process or as a part of a bilateral agreement reached with the U.S. Thus, according to an announcement made at the UN, the Soviet Armed Forces are to undergo a reduction of 10,000 tanks, 8,500 artillery systems, and 800 combat aircraft. The Soviet side is eliminating several thousand missiles in accordance with the INF Treaty. Hopefully, if the matter proceeds to a 50-percent reduction in strategic offensive armaments, further reductions will include tens of thousands of units of highly complex combat equipment that have cost billions for development and production and the intellectual labor of thousands of people.

Realistically speaking, we have just begun to disarm, but, as the saying goes, "We have already committed a number of grave errors in this regard." In the case of disarmament proceeding under the INF Treaty, for example, imaginative thinking has not progressed beyond converting prime movers used with the SS-20 missile into self-propelled platforms to be used as truck-mounted cranes, and utilization of two missiles as water towers by a gardening group operating near Kharkov. According to official announcements, the cost of INF Treaty components not subject to destruction amounts to 150 million rubles, which includes 50 million rubles for heavy prime movers.

The remaining armaments are being blown up on proving grounds, cut apart by welding torches, and crushed in presses. Instead of demonstrations of blowing up expensive missiles on proving grounds and giving away pieces to the peace-loving public as souvenirs, would it not be better to once more invite the Americans to the conference table and try to think of how to utilize the remaining missiles for peaceful purposes? It would also afford an opportunity to develop suitable monitoring procedures that would prevent military use of the missiles.

Scientists who have designed military equipment have estimated that utilization of the missiles in a large program of geophysical research would save the country 100 to 150 million rubles. The Soviet RMD-22 missile being eliminated in accordance with the terms of the agreement could with certain modifications lift a payload of about 100 kilograms more than 500 kilometers, while the RMD-23 could do the same to an altitude on the order of 300 kilometers. These are the very altitudes that are not regularly researched by civilian geophysical rockets.

The guidance systems of missile stages, if removed before the missiles are destroyed, could be utilized as high-speed power plants to effect another 15 million rubles in savings. If instead of blowing up the missiles we were to destroy them by cutting up the propulsion systems—the procedure followed by the Americans—the national economy would benefit by its receiving back high-strength steel and valuable nonferrous metals in the amount of more than 3 million rubles. By converting launcher prime movers and transport vehicles for the RMD-23 into self-propelled collapsible high-mobility platforms, we could service various tower structures (radio relay towers, power transmission lines, etc), with a minimum of 40 million rubles remaining in the country's pocket. Finally, we could give one or two missiles, reworked so as to be disabled, to all the country's military-patriotic museums, set them up as tourist displays and charge admission for the pleasure of looking at a relic of the military confrontation period. I do know that some foreigners are willing to pay for this in foreign exchange.

Thus, the balance of expenditures for the development and production of RSMD [intermediate-range and shorter-range missiles] and the minimal savings resulting from their elimination are certainly negative. We must

not repeat our error under any circumstances, if we are to speak of eliminating 50 percent—not 4 percent—of nuclear weapons per such a Soviet-American agreement. There already is talk of the possibility of utilizing elements of the strategic triad—to monitor the environment, for example.

Thus, large SS-18 missiles could be modified to serve ecological purposes, lifting artificial earth satellites into orbit. These kinds of satellites could be employed to survey the earth from space: monitoring the dynamics of cloud and snow cover; observing thermal inhomogeneities of the earth and ocean surface, volcanic activity, and forest fires; photography as applied to monitoring of crop harvests and plant diseases.

We could also not take the route of destroying heavy bombers offering a range of several thousand kilometers and a large cargo capacity, instead using them as multiple-function ecological laboratories. Such laboratories could monitor emissions from metallurgical, chemical and other ecologically hazardous enterprises located in remote areas of the country.

Nuclear-powered submarines, which are also included in the agreement limiting SNV [strategic offensive weapons], can do mankind good service if modified for ecological and economic purposes. This would make it possible to compensate in part for the shortage of scientific research vessels provided with ecological laboratories for oceanic research.

Maximum peaceful use must be found for all components of conventional armaments subject to unilateral reduction. Here we are once more feeling our way. It is proposed to destroy half the number of tanks and utilize the remaining half as simulators. No one is even concerned about the elementary economic inefficiency of converting materiel costing many millions into cheap models. Someone in Perm has proposed rendering artillery systems into pile-driving apparatus and modifying tanks to function as powerful and high-mobility bulldozers.

It is obvious that the absence of a general approach to conversion of conventional armaments to civilian applications can cause even greater material losses, since, ironically enough, these kinds of armaments are much more expensive than nuclear armaments. For this reason, I consider that it is important, at this early stage of reduction, to organize a group of qualified experts that would look at various options of elimination and utilization of combat materiel from the economic point of view and would select those options that could be employed at least cost but with maximum consideration of national economic interests. If it so happens that the INF Treaty or the Strategic Offensive Weapons Treaty bind us to international obligations, the question of how to proceed with reduction of conventional weapons as a function of unilateral disarmament is for us to decide. To join this group we could invite experts from other countries, primarily the US, Sweden, England, and Norway—countries that possess much more experience than we. If we do not skimp on

expenditures now, we will enjoy a substantial gain in the future; if we are greedy, we will suffer a loss.

Conversion of combat materiel by modification for civilian applications will apparently be planned as a loss-associated process. It is difficult to imagine the number of ecological investigations that must be carried out in the case of a former nuclear-powered missile carrier to at least make up for the costs of its construction—amounts that according to Western estimates may be as much as billions of dollars. However, even the thought that a pile of metal of a highly complex piece of equipment that has been a heavy burden to the country will provide some kind of economic return is of and by itself not bad.

Nevertheless, there are ways of converting combat materiel that make it possible to effect considerable economic profitability. One of them is associated with employing some items of military materiel in peaceful tasks. This pertains mainly to military transport aviation. The 60-odd AN-124s, AN-22s, IL-76s, and AN-12s remaining accountable as belonging to the Ministry of Defense will carry this year about 50,000 tons of economic freight costing more than 45 million rubles. Transportation costs will be calculated on the basis of rates usually applied in civil aviation. In this connection, 70 percent of the fees received will be transferred to the state budget, with the remaining amount retained by the Ministry of Defense as reimbursement for additional expenditures associated with these operations, including use of the aircraft.

I believe that this kind of conversion is entirely rational, since an urgent need for military transport aviation can develop in the case of unforeseen circumstances, such as the earthquake in Armenia or the gas pipeline accident in Bashkiria, a time when it became necessary to move large amounts of materials and hundreds of people great distances in a short period of time. For this reason, a dynamic and well-equipped transportation organ should always be in a position to carry out the orders of the State Commission of the Council of Ministers for Extraordinary Situations.

Why cannot civil instead of military aviation be used to make deliveries to residents of the Far East, Far North, the Arctic islands, oil workers, gas pipeline builders, and all persons who work in remote areas? The necessary aircraft could be acquired from the same Ministry of Defense, while operating expenses in the civilian sector would be milder.

Incidentally, the sale of materiel slated for armament reduction is another source of cost recovery that has hardly been touched. The Ministry of Defense has already prepared and forwarded to the USSR Gosnab a list of these items totalling more than half a billion rubles that are under consideration for sale in 1989 to the public, to cooperatives, and to other organizations through the territorial organs of the Gosnab. This list includes instruments, mechanisms, and even auxiliary

naval vessels; more than 20,000 refuelling, transport, and pumping units for fuels and lubricants; towed meat processors made for the Army and designed to slaughter cattle, dress and refrigerate the meat under field conditions; microcircuits, transistors, diodes, and other radio and electrical devices used by the military, and much more.

It is obvious that the only items offered for sale are those pieces of military equipment that can be put to civilian use without any modification. Should we consider offering, to state and cooperative organizations, for example, several types of tanks subject to elimination, but at the same price paid by the Armed Forces, minus depreciation? It should be understood that such a sale will take place under the condition that the steel monsters be subsequently disassembled under strict state control. There is no doubt that enterprises of the machinebuilding, metallurgical, and other ministries would be interested in acquiring the armament either independently or in collaboration with enterprises of other sectors, the idea being to divide the parts among themselves. Parts which are not needed will be scrapped.

The receipts resulting from sale of armaments on the home market will be incorporated into the state budget. Some of the receipts can be used simply to reduce the enormous inflationary amount.

I see nothing reprehensible or detrimental to internal stability in selling armaments and their components to Soviet organizations. First, the items can be rendered unfit for combat use before the sale; second, we are not concerned with our security, since we do sell the latest types of armaments to foreign countries. Last year the Soviet military's MIG-29 was demonstrated for the first time, at Farnborough in England; at the recent show at Le Bourget in France we came out with the SU-27 fighter-interceptor and the SU-25 ground-attack aircraft.

It is common knowledge that the shows are held not only for the prestige value, but also to find someone with whom mutually advantageous commercial contracts can be negotiated. Judging from the press reports, our aircraft were highly regarded by experts, in spite of the accident.

According to Western sources, the Soviet Union is one of the largest suppliers of armaments to the world market. In the late 1970s we went so far as to hold talks with the US relative to reducing international sales and deliveries of armaments, something we have actively continued to pursue. The open press has not reported what kinds and amounts of arms we ship and the particular countries receiving those shipments.

There may be some merit to supplying to foreign countries a portion of the combat material that is being pulled out of service, naturally not to include that which is not to be distributed under the terms of international legal obligations, the IAEA, or other organizations with which our country is involved. It would be wise to direct these deliveries to customers that are in a position to pay for

the materiel in hard currency, at the same time analyzing the level of the monetary effectiveness relative to military exports by comparing the volumes of foreign sales of weapons for hard currency with the volumes of deliveries on the basis of Soviet credit terms. Considerations of political expedience would be of decisive importance, naturally.

If it becomes possible for military plants, the same as other Soviet enterprises, to enter the foreign market on their own, this will contribute to developing the competitiveness of the country's machinery exports. Currency earned by the enterprises could be used by them to finance conversion and retooling, with the result that they would rapidly acquire the capability of supplying the foreign market with a wide assortment of sophisticated civilian products reflecting world standards. The state's role in this regard would consist of regulating and balancing the economic and political interests of military exports and devising economic incentives to encourage military enterprises to manufacture competitive products for the civilian market.

Finally, a major concern in conversion is the human aspect. Reduction of the Armed Forces will result in the discharge of a half a million men. Many of them have families. This means that the reduction will affect the lives of a total of about 1.5 million persons. If we add to this figure the number of those who will be forced to leave military enterprises as a result of closings or realignment, the total number of persons directly affected by conversion will be even larger.

Social protectiveness of man is one of the principal achievements of socialism. However, the problem here is that the state is not always able to fulfill its requirements due to the fact that many socio-economic problems the country is suffering have not been solved in general. If the situation is such that even an officer discharged from the Army after completing his term of service cannot obtain an apartment for three years, let alone the three months stipulated by law, what will happen when a large number of servicemen will be discharged? Even the 7,500 apartments the Ministry of Defense plans to build in the next two years specially for them will not solve the problem.

According to statements made by military officials, the first to be released are officers, Army and Navy warrant officers, and servicemen on extended service who have attained the maximum age and are authorized a pension and have housing waiting for them. Also to be discharged are all officers called up for active duty from the reserve. Some servicemen of these—the most socially secure groups—will return to their previous jobs, while the others will fill the ranks of millions of "young" pensioners. This will place a greater load on the pension component of the military, i.e., the state, budget.

It is difficult to predict the outcome of the solution proposed jointly by the Ministry of Defense and the USSR Goskomtrud [State Committee of the USSR

Council of Ministers on Problems of Labor and Wages]. This consists of hiring discharged servicemen to fill specific jobs in the country's enterprises and construction projects in the Far North and equivalent areas and on kolkhozes and sovkhozes. Military people are disciplined, but will they want to become "average citizens", walking on permafrost or wading through rural mud? In addition, what about their qualifications? It is quite possible that many of them simply do not offer the specialties required in the North or on the farm.

Our Army is aging quite a bit. This is especially noticeable in Moscow, in the area of Bulvarnoye koltso and Frunzenskaya naberezhnaya. We must adopt measures that will prohibit the discharge of young officers, military VUZ instructors, military scientists, physicians, and jurists, and provide for the retraining of servicemen whose specialty is no longer in demand.

In a word, the Armed Forces and armaments reduction process is laborious and expensive. Official estimates indicate that the new military-technical policy, which calls for the design of inexpensive asymmetric armaments, review and reduction in purchases of offensive armaments, a general lowering of expenditures in connection with elimination of RSMD, and the reduction in the Armed Forces, will, on the basis of the approved five-year plan, effect savings of almost 30 billion rubles. That is not much.

Furthermore, it is not clear that the above figure includes expenditures—and they are not inconsiderable at that—that are associated with effecting the conversion process. If it does not, this leaves open the possibility that reduction in defense spending will entail other and greater expenditures for other departments to finance retooling of military enterprises for civilian production, the utilization of armaments, and reemployment and retraining demobilized servicemen. Past experience and econometric modeling of conversion carried out in other countries indicate that it requires additional not fewer expenditures as far as the state is concerned, especially in the initial stages.

A situation wherein conversion has the negative effect of exacerbating existing socio-economic imbalances can be prevented by developing a Special-Purpose Integrated Conversion Program. It should offer built-in flexibility and proceed from approved political decisions related to disarmament on the one hand, and future decisions to be made in this regard on the other, up to complete disarmament.

No harm would be done if such a program were in place at the present time. It could be built on the principle of some kind of self-financing and cost recovery for conversion. This kind of economic accountability presupposes the development of priorities for each stage of conversion, such that it would be possible to make up for the attendant expenditures on the basis of the resources released by disarmament, with the added advantage of a surplus of funds that could be used to resolve socio-economic tasks.

Relative to securing support of disarmament on the part of common people, who are much more interested in what they can buy in the store than in questions of international security, it may be a good idea to publish a statement showing the advantages and disadvantages of particular measures pertaining to this process: so much spent to manufacture the armaments being taken out of service; so much to be spent on conversion; so much remaining; the kinds of tasks the available funds can resolve: construction of a large residential facility, road repair, higher pensions, etc.

To prevent further destruction of expensive military equipment and inefficient use of military-industrial potential in our compliance with disarmament agreements, we could operate under the aegis of social organizations, primarily the VTSPS [All-Union Central Council of Trade Unions] and the SKZM [Soviet Committee for Protection of Peace], to devise a competition to gather ideas for alternative uses of armaments. This is the route taken by trade unions of some Western countries, whereby they developed conversion models as early as the beginning of this decade, a time when there was no discussion of disarmament.

In this connection, I cannot fail to mention that legislation on conversion has been debated in the US for the past quarter of a century. Bills are usually introduced for consideration by Congress several weeks after the USSR makes an announcement of reduction in its Armed Forces. That was the case in the early 1960s during the "Khrushchev demobilizations" and in the early part of 1989, even though the US as a whole has not raised the question of reducing its Armed Forces.

If our legislators were to carefully examine this draft bill, they would certainly see that many of its provisions are applicable to Soviet military economics. The most important point to be made here is that conversion in a militarily significant country must necessarily be placed on a legislative basis. It is precisely a legislative setting that is required to solidify the concept, purpose, principles, control mechanisms, finance sources, planning methods, time frames, and other parameters of conversion. The latter involves enormous masses of productive forces; its effectuation without preliminary adoption of a USSR Law and associated state plan may lead to serious socio-economic disruptions.

Everyone is affected by conversion. In this area, which is new to us, we can no longer operate by trial and error, since too much time would be lost on each trial and the cost of each error would be too high. Conversion must not only insure that each step of practical disarmament strengthens the abstract security of man; it must also proffer a lightening of his burdens of life and labor, something which to him is much more meaningful.

COPYRIGHT: Izdatelstvo TsK KPSS "Pravda", "Ogonek", 1989.

### Conversion: Lower Profit, Higher Investment at Kuybyshev Plant

18010873 Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 89 p 9

[V. Ulyanov report: "A New Occupation for the Plant... The Difficulties That the 'Defense People' Have Encountered During the Switch to the Output of Civilian Output"]

[Text] Kuybyshev—Several months ago conversion marched into the shops of the Kuybyshev Mechanical Plant—one of the enterprises of the Ministry of the Aviation Industry. Production of equipment on orders from the USSR Ministry of Defense is being cut back 8.2 percent this year, and next year the figure will be 22.4 percent. But here is the paradox. Because of the structural shift in the volumes, this year the enterprise will be R2 million short on profit, and deductions into the social development and material incentive funds will be almost 60 percent below plan.

"It is naive to suggest that freeing up production areas and material resources and manpower will automatically insure a proportional increase in the production of civilian output. It is all much more complicated," says the plant director, A. Ponedelnikov. "Taking into account the program that has been adopted, this year and next we must spend R4 million just on reconstruction and retooling, and no provision was made for this in the estimates. Funding is an acute problem. It must be determined in line with the requirements for resources, and new contracts must be signed with suppliers. And it is not a simple thing to do this. To replace the output for the USSR Ministry of the Aviation Industry withdrawn from production we have a 100-percent state order for civilian articles, all of which are unprofitable for the plant. In order to maintain the financial health of the enterprise or gradually lose the collective we must ask for help from sector headquarters.

In fact, the situation that has developed is not simple. Profitability of labor-intensive and expensive defense output is quite high, and the withdrawal of part of it from the plan has left a palpable gap in the volumes of output, on which the wages fund is formed. Neutralizing the latter circumstance, the Ministry of the Aviation Industry has established for the plant a norm for average wage increases to outstrip labor productivity. However, it has not been possible to work up to production of a new range of output that is equivalent to the "defense work" in terms of value. As a result, millions have been lost from profits.

The new occupation for the plant is to manufacture articles designed to augment the "arsenals" of light industry and the agroindustrial complex. Already by the fourth quarter it is planned to ship 25 folding-and-cutting machines for the textile workers, 165 sugar mills for the confectionery workers, and 36 garlic-cleaning machines for the meat-processing enterprises. The engineers are now replanning equipment in order to free up 1,000 square meters of area,

and are setting up special sections and preparing the technological process. Amendments to the contracts with suppliers of defense materials and subassemblies have made it possible to reduce above-normative stocks by 30 percent. But already the first estimates of the economists are showing that the value of civilian articles will be less even than the cost of preparing the technological equipment. And to this must also be added the cost of materials, wages, and high overheads.

It is difficult to say how accurately the Ivanovo "Ivtkemash" Plant and the Kuybyshev "Prodmask" Plant, designated by the Ministry of the Aviation Industry as general clients, have evaluated the requirements of the corresponding subsectors of the light and food industries for this equipment. But according to the ideas of the sector headquarters, after producing output worth R2.18 million, the Kuybyshev Mechanical Plant will be forced to curtail production, mothball the process, and wait for several years for the next order. Meanwhile, it will have to produce new models. It is thought that it would be difficult to find a more wasteful approach to the use of the unique capabilities of the defense enterprise.

"In our view, the decision to establish a 100-percent state order for conversion output was wrong," says G. Miroshnin, the plant's chief engineer. "Enterprises must be given the right to find clients independently and agree with them on the volumes and products lists of articles on the basis of mutual advantage. For example, a Belorussian organization proposed that we supply balloon tires for automobiles. We plan to use part of our additional freed-up capacities to handle this profitable order. There are also other attractive projects. But their realization again rests on the 100-percent state order."

The financial difficulties are also being made worse by other factors. Thus, the change in the production program in favor of less expensive articles is leading to a decline in total profitability at the enterprise. The dependence works like this: with the shorter production runs for military equipment, overheads are skyrocketing. And whereas previously losses from the production of one-off orders were covered by the profit from standing production, with the increased proportion of civilian and consumer goods this opportunity is now being curtailed, and the enterprise is steadily sliding toward the "poverty line."

The structural change has also brought an imbalance to the relationship between labor intensiveness and output volumes expressed in cost terms. Reducing planned labor expenditures to produce defense equipment has already made it possible to free up about 400 main workers. They will be brought into play in the restructured parts of the production facility. However, given a similar labor intensiveness, labor productivity as calculated from the value of output, will be lower here. With the increase in personnel, the normative relationship between labor productivity growth and the average wage will deteriorate, and this will threaten a freezing of payments from the wages fund.

"How can we explain this paradox to people? For in fact they are not to blame for violation of the norm," says N. Samoylov, the plant deputy director for economics. "In order to insure an accurate evaluation of efforts by the collective, in my opinion labor productivity in the converted sectors should be determined from the norm for net output."

Additional expenses for the "defense people" are connected with the preparation of technical documentation for new articles. For example, the design institute of the USSR Ministry of Light Industry sold the Kuybyshev Mechanical Plant some far from new documentation on the folding-and-cutting machine for R35,000. But the obsolete and poor quality documentation for light and food industry equipment requires additional spending to rework it. In the opinion of specialists from the engineering services at the enterprise, it is essential to be more active in recruiting strong design subdivisions from the sector for the preparation of technical documentation for civilian output, and for the Ministry of the Aviation Industry to adopt a special decision on this.

So how to fight the financial problems stemming from conversion?

"There are several organizational and economic approaches here but they all imply that we receive help from ministry sources," N. Samoylov continues. "We have submitted our own proposals to the sector headquarters for compensation for the costs of conversion. We are asking that R2 million be allocated this year for this purpose, or that the planned deductions to higher organs and payments for fixed capital and manpower resources include that same sum. But it would be more acceptable to amend the economic norms. In principle the ministry is not refusing to consider a review of the norm but it is not actually conducting such a review, making references to the lack of any appropriate government decision. Moreover, the sincerity of the assurances does not sit well with the continuing withdrawal of 35 percent of the enterprise production development fund, formed from amortization payments.

While setting their hopes in support from outside, the defense people, of course, must also take internal reserves into account. In particular, without significant additional spending the plant could already increase the output of profitable consumer goods about 10 percent. There is virtually endless demand for unbreakable, metal vacuum flasks in the country's domestic market. With appropriate design work, quite good export opportunities can be seen. However, because of lack of stocks of stainless steel the plant is producing only 250,000 of these scarce vacuum flasks annually, while the orders from trade total 400,000. What is the solution? The Ministry of the Aviation Industry Main Supply Administration should conduct a careful study and give consideration to the demands entailed in conversion at the plant, with an internal sector re-allocation of resources.

Obviously the plant faces the task of creating its own commercial service. Compared to this year, already by

next year the production of civilian output and consumer goods will rise to 54.8 percent, and the need for knowledge about market conditions will grow stronger. Meanwhile the defense people have minimal experience in this sphere. For example, gadgets for small automobiles being produced with a view to sales to the "Roskhozorg" happened to come about "by chance." In other words, the search for partners is being done blind. Sector predictions of the market, whose preparation could be assumed by the information subdivisions of the ministry, would also be useful.

### Azerbaijan Gosplan Chief Interviewed On Defense Conversion

*18010856c Baku BAKINSKIY RABOCHIY in Russian  
4 Jun 89 p 2*

[Article by V. Nalbandov: "Our Interview: A New Occupation For The Defense Industry Complex"]

[Text] The country's defense complex will produce tens of billions of rubles' worth of civilian products by year's end. Hundreds of types of consumer goods will roll off the assembly lines of enterprises whose names never even used to be mentioned in the press.

A BAKINSKIY RABOCHIY correspondent asked A. Gadzhiev, Deputy Chairman of the Azerbaijan SSR State Planning Committee, to respond to a number of questions about the role that the conversion under way in the country is playing in improving the economic situation and about what conversion will do for our republic.

[Gadzhiev] First I would like to speak briefly about what the complex of defense industry branches actually is, about how it is represented in Azerbaijan, and about its role in the republic economy.

Under the existing statute, the complex consists of the enterprises (associations), research organizations, and construction and installation subdivisions of several union ministries, as well as the State Committee for Computer Equipment and Information Science that was set up a few years ago. The defense complex also consists of radio electronics industry enterprises and communications equipment enterprises, whose impact on accelerated scientific and technological progress is, as we know, of decisive importance.

Azerbaijan also has enterprises and organizations of the defense ministries. Their development has significantly raised the technical level of the republic's machine building and promoted the training and growth of skilled personnel who are capable of successfully accomplishing major scientific and technological tasks. The overwhelming majority of defense industry enterprises have a high organizational, engineering, and scientific level. The use of this potential in reequipping the national economy, in manufacturing the producer goods so vitally needed today for the light, food, and medical industries,

and in expanding consumer goods production will undoubtedly provide a powerful impetus.

[Nalbandov] As we know, enterprises of the country's defense branches made a substantial contribution to the national economy in the past as well. But just what sort of contribution the press was never allowed to say. What can the defense complex produce?

[Gadzhiev] It produces optical equipment—including consumer optical goods, medical equipment, a sizable share of all computer equipment for the national economy, and a large and diverse mix of technically complex household appliances.

In recent years, enterprises of the defense industry branches have actively joined in the manufacture of producer goods for the agroindustrial complex. As a result of conversion, the scope of this work will grow considerably, and certain enterprises could shift to the production of civilian output completely.

[Nalbandov] For a number of enterprises, obviously, the process of converting to civilian output is no simple business. What kinds of problems are being encountered?

[Gadzhiev] In a number of instances, it will be necessary to make technical preparations for the production of completely new output in a relatively short period of time. It must be said bluntly that not everyone proved ready for this turn of events.

The constructive international policy of our state and its new thinking with respect to the defense capability the country really needs have made it possible to reach agreement on mutual reductions in military potential in an unprecedented period of time. It must be said frankly that this caught some economic managers unawares. Now they are having to restructure production on the move, so to speak, and to come up with new types of output, something that inevitably entails production and financial losses. Yet the progress in disarmament negotiations and the types of defense hardware subject to cuts were widely covered in the press, and a good, farsighted manager was obliged to anticipate subsequent events and to prepare his enterprise for the production of new, civilian output in good time. Unfortunately, the old ways of thinking of some managers have made themselves felt in this area, too.

[Nalbandov] What scope will conversion assume in the republic, in view of the specialization of the enterprises located within its territory?

[Gadzhiev] The reduced production of military hardware is expected to amount to several percent of these enterprises' total output volume. But even these seemingly small production volumes have presented us with a number of serious problems concerning the utilization of vacated production space and the retooling of production facilities under construction.

It must be pointed out that foot-dragging is inadmissible here, that questions must be resolved quickly, that initiative and persistence must be shown, and that non-standard decisions must be taken. Procrastination could lead to not only economic losses, as all defense industry complex enterprises switched to full economic accountability as of the start of the year, but also losses of available skilled personnel. For this reason, the State Planning Committee, in conjunction with enterprises where conversion is anticipated and the relevant union ministries, is working to organize the production of new types of consumer goods starting this year.

And so the production of gas-fired water heaters and home stereo tapeplayers is being set up. Our proposals for the production of certain medical instruments are being considered.

Nevertheless, let me say that enterprises in our republic are still taking an insufficient part in the production of technically complex consumer goods. Meanwhile, analysis shows that there are considerable possibilities in this regard. The enterprises have enough production space to organize specialized shops for the production of civilian goods. The republic State Planning Committee has therefore raised this matter with union bodies, and its resolution will make it possible to put other types of goods into production. In conclusion, let me say that some of these production facilities are to be organized jointly with foreign firms.

## REGIONAL DEVELOPMENT

### Decentralized Management Requires New Territorial-Administrative Units

18200446 Moscow *IZVESTIYA* in Russian  
23 Aug 89 p 2

[Article by N. Agafonov, Ph.D. in Geographical Sciences; P. Lebedev, Ph.D. in Legal Sciences; and M. Mezhevich, Ph.D. in Philosophical Sciences: "Local Power: To Whom It Belongs and How It Is Used"]

[Text] Many people now realize that to achieve a qualitative renewal of Soviet society we need to create a new system of local government. We need a radical reform of the entire political system and of all government and management bodies at the center and at the local level.

Potential for restoring the preeminence of legislative bodies both in the country as a whole and in the union republics has emerged and early steps in that direction have been made. In the future, however, more radical changes, going well beyond purely organizational ones, will be needed in order to bolster local soviets, including the Supreme Soviets of the autonomous republics.

Talk of strengthening the material and financial resources of local soviets began a long time ago, but their resources remain inadequate for their main task, that of promoting general social and economic development in

their areas. No matter how actively those soviets and their ispolkoms make use of their rights, they are unable to alter the situation.

Centralization of resource distribution has led to a situation whereby local spending is being increasingly financed not by local revenues (which are insufficient as most enterprises in local soviets' territory report to republican or union-wide organizations), but by contributions from state revenues which are set on an annual basis by authorities at higher levels. This is why local government and management bodies are in effect condemned to live at the expense of higher authorities or of the management of major enterprises which are located in their territory but are not under their jurisdiction.

In other words, state resources are first disseminated widely along a multitude of administrative channels, according to the whim of higher authorities, and then, at the local level and with great losses, gathered once again into a single center and spent in a disorderly manner. Of course, this incomprehensible system was never developed on purpose and never approved by anyone. It arose all by itself as a result of confused activity under the conditions of bureaucratic centralism.

How to get rid of this system? This question was supposed to be addressed while the new law on local autonomy and local economy was being drafted. The work on the draft is nearly complete, but the results (in the course of our work we were able to see preliminary versions of the draft) raise serious concerns. Based on existing evidence, this undertaking will not have the expected effect.

To lay bare the roots of the lack of economic autonomy of local soviets one must direct one's attention to the administrative-territorial division of the country. The draft shuns this issue, which was not raised at the Congress of the People's Deputies, either. And yet, it is of great importance for coordinating the industry and territorial principles of management in our enormous country and consequently for raising the status and effectiveness of local soviets.

In the first years of Soviet power, a strictly scientific system of administrative-territorial division of the country had been developed, based on economic, nationality and administrative principles. The system was fully formulated and laid out in the "Theses on Economic Rayonization of Russia," developed by the special commission of the VTsIK Presidium in April 1922 and in the resolution of the 12th party congress titled "On Rayonization."

"In accordance with our Constitution and the general principles of our nationalities policy, a system of economic rayonization [rayonirovaniye] must be developed in a form that would foster the material and spiritual development of all nationalities and tribes of the RSFSR, based on the special features of their lifestyles, culture and economic conditions," stated the "Theses." It also stressed—correctly—that "the size, structure and

interactions of economic rayons will have an impact on the structure of economic management bodies, and through them on the entire system of government, and in particular on the system of local power." (You must agree that these words seem very topical today, as we discuss the CPSU draft program on nationalities policy!)

By the late 1920s, the administrative and territorial division of the country based on very scientific principles was complete. Thirty four large administrative oblasts were created (by the late 1930s their number rose to 42) in three of the union republics: the RSFSR, the Ukraine and Kazakhstan. The rest were not divided into oblasts, since the size of their territory and population approximated that of the average oblast at the time.

The creation of major administrative-territorial units opened the opportunity for rather broad and relatively independent economic activity, based on local characteristics and available resources. However, in the late 1930s, that seriously prepared and recently adopted territorial division was revamped. The number of administrative oblasts more than doubled.

It is not hard to guess that at the time, administrative oblasts were not only sliced thinner. They were also made both insignificant compared to the all-powerful center and easily visible from above. The borders of autonomous nationalities—organized both into republics and into oblasts—were kept intact as they were in line with the scale of new oblasts. However, the economic factor was no longer taken into account: making decisions on what was to be developed and how it became the prerogative of the center.

Inertia carried the process of dividing oblasts into smaller units ever since, until the 1980s. As a result, the country is now split into 120 oblasts and krays. Adding to this number the 28 ethnic entities (autonomous republics and oblasts), which are very similar to the oblasts as far as their economic independence from the center is concerned (or, more precisely, the lack of it), it becomes clear from the numbers alone why we have been unable to implement the principle of territorial management. It is tightly blocked by the administrative division and paralyzed by the total economic dependence of the main administrative units on the center. Meanwhile, the industry principle receives greater and greater impetus from the center. Under the influence of the latter principle, a new slicing of territory is taking place, as the so-called territorial-industrial complexes have already been formed. This process is in no way monitored by local authorities.

It would seem clear that decentralization of authority can be achieved only by strengthening the system of local government. We should bolster the main link of local government by merging 2 or 3 present administrative oblasts into one, giving these new, larger entities at least as much power to allocate resources as union republics without oblast divisions currently have.

The draft general principles of administrative restructuring of the union republics call for broadening their rights. The same should apply to the enlarged administrative oblasts. If they find this way barred to them, the favorable impact of decentralization augured by the implementation of those principles will be felt only in small union republics. It will be minimal or negligible in the largest republics, in the RSFSR, the Ukraine and Kazakhstan. In general, the larger the union republic the smaller the prospective impact of decentralization. As a result, there is reason to fear increased future disparities in living standard and quality of life among different regions of the country. Even now gaps exist in such indicators as per capita output of consumer goods, distribution of housing and childcare facilities and development of consumer services. Once the republics are granted economic independence and begin making use of their right to establish various supplementary payments and raises, such disparities will widen and become contrasts.

The increased independence that those principles call for will be felt least by the peoples of the huge Russian Federation. RSFSR ministries and agencies will be unable to change this trend, even if they were willing to do so. It could only be done by local soviets. Republic ministries and agencies are as distant from the population of the oblasts, krays and autonomous republics and oblasts of the RSFSR as union ministries and agencies are from the peoples of the Baltic republics, for instance. The measure of decentralization promised by the draft principles is considerably lower for the RSFSR than for the republics without oblast divisions (27 percent vs. 70 percent, respectively).

The creation of large administrative oblasts will open the opportunity for transferring many enterprises and organizations which now report to union and republic-level entities to the local jurisdiction and for increasing the scale of local economic activity. In this case, local spending could be funded by local sources of revenues. All this is all the more important since the issue of administrative-territorial division and its improvement is closely tied to the issues of economic independence, regional autonomy and national sovereignty which are treated in the CPSU's draft program. The rejection of the administrative economic management methods assumes equal economic opportunities for state entities of every type, be it a union or autonomous republic, or an autonomous or administrative oblast. (We mean here, of course, the extent of economic independence and not political status, which is different for the above-mentioned entities.)

There is also another advantage to be gained by enlarging administrative oblasts. Currently, every oblast center has two parallel party and state leadership structures: party gorkoms and obkoms as well as city and oblast ispolkoms. When there are half as many oblasts, the number of oblispolkoms and obkoms will naturally decline by 70 each. This is an excellent opportunity to cut spending on the leadership apparatus.

Finally, it must be mentioned that the creation of large oblasts will allow us to ease the burden on the center of government. The number of recipients of orders and instructions circulating down and of reports flowing up will be greatly reduced.

There are many unresolved political, economic and organizational issues on the path to granting full powers to soviets. As long as they remain unresolved, and until the complex and difficult task of creating conditions for people to function normally and for their activities to be organized is devolved rationally along all levels of state hierarchy, we will not have a flexible and efficient administrative system that would be sensitive to the interests of man and society. The resolution of these issues is the essence of perestroika in government and of the tangible renewal of the entire political system.

### LaSSR Economic Autonomy Plan Criticized

#### Goals Linked to National Ideology

18200430 Riga SOVETSKAYA LATVIYA in Russian  
12, 13 Jul 89, p 2

[Article by Candidate of Economic Sciences A. Malinkovskiy: "A Shortage of Responsibility—Discussing the Drafts of Republic Laws"]

[12 Jul 89, p 2]

[Text]

The draft of the law "The Economic Independence of the LaSSR" that was published for discussion and developed on the basis of the Concepts of Economic Independence of the Latvian SSR emphasizes that "economic activity should provide for the preservation of the basic nation on its historical territory."

Is the terminology "basic nation" correct? Representatives of 130 nationalities live in the Latvian SSR. Latvians comprise roughly 50 percent of the overall population of the republic. Their proportionate share of the sectors of material production in 1987 was 38.1 percent in industry and construction, 33.8 in transport and 45.3 in housing and municipal and consumer services. The share of the Latvian ethnic group was 80-84 percent only in the timber and farming industries, which comprise some 16 percent of those employed in the national economy.<sup>1</sup> The number of Latvians employed at enterprises and organizations of the republic totaled 571,800 people, or 47.6 percent of the overall number of manual and office workers.

It can be seen from the statistical data that individuals of the indigenous nationality do not even comprise a relative majority in a large portion of the sectors of material production, and consequently they do not produce the principal portion of either the aggregate social product or national income.

The proportionate share of Latvians employed in non-productive sectors is high at the same time. They comprised 74.6 percent in culture and the arts, 58.8 in elementary education and 53.4 percent in health care, physical fitness and social security in 1987.<sup>2</sup> Their proportionate share in administration is even higher. They are 77 percent of the chairmen of rayon and city ispolkoms, 83 percent of ministers and chairmen of the state committees of the republic, 65 percent of the Council of Ministers apparatus, 79 percent of the directors of sovkhozes and 88 percent of the chairmen of kolkhozes.<sup>3</sup>

And what is the number of individuals of the Latvian nationality in the nationality composition of the republic party organization? They were 39.7 percent according to data for 1 January 1988, as well as 62.3 percent among the secretaries of primary party organizations, 80 percent of the central committee secretaries and 65.2 percent of the employees of rayon and city party committees.<sup>4</sup>

Representatives of the Latvian ethnic group, as can be seen, occupy a leading position both in the system of party, state and economic leadership and in administration.

It is thus essential to be principled and consistent. While completely justifiably criticizing the ideology of the "older brother," we cannot replace it with the ideology of the "basic nation," otherwise one could suspect the authors of the draft law on economic independence for the republic of something very non-ethnic in nature.

The draft law speaks of "preserving the basic nation on its historical territory." Does anyone really want to eliminate the Latvian ethnic group? Of course not: we should not extend the Stalinist deformations of socialism to the current policies of the CPSU. One furthermore cannot equate republic and ethnic territories. Not one of the union or autonomous republics of the USSR coincides completely in a territorial fashion with the origin, development and historical or contemporary settlement of this or that ethnic group. Such an equation is fraught with serious theoretical misunderstandings and national and political conflict.

If we equate territories with ethnic groups, then we will have to acknowledge that all of the Baltic area is excluded from the ethnic territory of the Slavic peoples, while Bukhara and Samarkand are not part of the ethnic territory of the Tajiks. The fact that these peoples have their own nation-state formations cannot be an argument in favor of such an equation, otherwise it obtains that the Tajiks of Uzbekistan or the Belorussians of Latvia are doomed to worse conditions of ethno-cultural development just because they live outside the boundaries of their own republics. And what about the peoples who do not have autonomy at all (the gypsies, for example)? There is consequently no place and no need for them to reproduce?

It is impossible to lump together relations between all-union territories and republics that are polyethnic in population composition with peoples and ethnic groups. This circumstance is not always taken into account or

realized. National relations are usually understood at the level of everyday consciousness first and foremost as relations among republics. This is disorienting in analyzing nationality problems and, aside from everything else, makes it possible for those who want to pass off exclusively nationality-based interests as the interests of the whole republic and to claim privileged rights for the people for whom the republic is named. There can only be one result—an imbalance of interests and growth in tensions among nationalities.

It should be stated in summing up that two questions are being clearly delineated among the whole set of national and political problems of Soviet society: the question of relations among republics, i.e., effectively among states, and the question of relations among nationalities—the relations among the peoples of the country. Keeping in mind that the USSR was created according to national-territorial features, we must solve not one but two problems: the problem of improving the Soviet federation and the problem of regulating relations among nationalities. There is unfortunately in essence one idea that threads through the whole draft of the law "The Economic Independence of the LaSSR": not what to undertake to strengthen the federation, but only how to create confederative economic relations. Activity that contradicts this approach, the draft law emphasizes, will be curtailed with the aid of economic and legal measures.

Confederative economic relations were most fully reflected in the Concepts of Economic Independence of the Latvian SSR that were published in June of this year.<sup>5</sup>

We turn to history in order to uncover how the process of devising these concepts transpired.

There was an expanded plenum of the Latvian Communist Party Board in June of 1988. The resolution emphasized that "there is concern that national riches, and first and foremost natural riches, be used in the interests of the indigenous population."<sup>6</sup> It turns out that almost 1 million people of the population of the republic are deprived of the right to make use of the national wealth created by their own hands in their own interests.

This approach was consolidated in the program of the Popular Front of Latvia, which indicates that its activity is founded on the principles of the 19th All-Union Party Conference and the resolutions of the June (1988) Plenum of the LaSSR Writers' Union.<sup>7</sup>

The 9th Session of the LaSSR Supreme Soviet narrowed the problem even more—it moved from the indigenous population to the indigenous nation: "Whatever questions we may discuss, the point of departure for their resolution should be the interests of the indigenous nation."<sup>8</sup> This signifies that in the resolution of any questions, the interests of 1.3 million people of the republic will now not be taken into account.

The manifestation of regional egotism was subsequently expressed in strict restrictions on postal, railroad and air

departures outside the boundaries of the republic<sup>9</sup> and unjustified forms of prohibitions on population migration instead of its efficient regulation.

All of this could lead to a rift in the objective ties of the republic with regions, while they should know to value those ties; after all, the delivery of material assets into the republic in 1987 totaled some 6 billion rubles, or 35 percent of the production volume of the gross social product.<sup>10</sup> Such activity could lead to irregularities in deliveries and be a blow to the standard of living of all ethnic groups living in the republic.

The materials from a conference of specialists from the Lithuanian, Latvian and Estonian SSRs that was held in Riga on 21-23 September 1988 to develop a new model of socio-economic development were fundamental to an understanding of the extant political situation in the republic. Taking part in the work of this conference were Latvian CP Buro member V. Bresis, Central Committee Secretary and Buro member J. Okherin and Central Committee member and republic Gosplan Chairman M. Raman. The results of the conference were reflected in the coordinated fundamental principles of republic economic accountability [*khozraschet*] that were signed by M. Raman in the name of the Latvian SSR.

The founding congress of the Popular Front of Latvia [PFL] that was held in October 1988 emphasized in its Resolution No. 4 on Economic Sovereignty that in the "ultimate development of a model of socio-economic development for Latvia, we must rely on the basic principles of republic economic accountability that were coordinated and introduced in the minutes of the conference of 21-23 September 1988."<sup>11</sup>

A merging of official economic policy with the ideology of the PFL thereby occurred on the basis of the coordinated principles of republic economic accountability.

On the basis of what doctrinal provisions did this merging take place? First of all, on the recognition of republic ownership that is economically and legally separate from the ownership of other union republics; second, on the pursuit of an independent internal and external economic policy for the republic, which conducts its activity in mutual relations with the other union republics on an equivalent basis; and third, on the introduction of their own currency.

This supporting framework of republic economic accountability is at its foundation an attempt to break up the Soviet federation and move to confederative relations within the composition of the USSR.

[13 Jul 89, p 2]

[Text]

#### Foundation of Plan Called 'Shaky'

The problem of the interconnection of union republics and the center is being widely discussed in the press

today. There basically exist two polar viewpoints. One of them consists of the recognition of the necessity of a redistribution of state authority in such a way that the union republics could themselves implement the whole range of state power on "their own" territory. This point of view also includes the provision that a state cannot be deemed sovereign if it cannot manage independently its territory and resources. This point of view can be reduced in brief to the recognition of the union republic as primary and the federation as secondary and derivative. The other viewpoint consists of the recognition of the whole range of state authority for the federation and the same completeness in the disposal of resources.

The first viewpoint is considered by its authors to be a considered and genuinely revolutionary one corresponding to the letter and spirit of restructuring. The second viewpoint, in their opinion, is the yesterday of our federation.

Both points of view are incorrect in an academic regard. The elements of ties on the methodological plane are being ignored here. And in reality the general features of the whole (federation) are not reduced to the general features of the parts (the union republics and the center) that comprise that whole. They become parts (center and republics) of an organism (such as the socialist federation is), Hegel said, in the hands of the pathoanatomist, but in that case we are dealing not with a living organism, but with corpses. The organism—as F. Engels loved to repeat—is alive and thereby differs from its parts, which cannot live. We must not focus our attention on some single aspect—the center or the republics—but rather on an understanding of providing for their dialectical unity. An understanding of the fact that without reinforcing the inseparability of their ties, both the sovereign center and the sovereign socialist republic will disappear and the disintegration of the USSR will occur.

Is it possible to envisage all aspects of this unity in agreements concluded by each union republic with the center? Obviously not. Life is much more dynamic than any agreement. The discussion thus objectively concerns the more precise delimitation of authority between the union republics and the center, the greater imbuing of each republic with sovereign rights and the greater imbuing of the center with sovereign rights. The socialist federation can further develop today only thus. The assertions of some authors who consider themselves experts in the realm of law that the "sovereignty of the republic either exists or it does not" thus illustrate very well a lack of understanding of dialectics on their part. One cannot employ the framework of international law in describing a new type of relations that were unknown in practice before, namely a socialist polynational federation.

The imbuing of the center with sovereign rights today will proceed in the direction of devising a unified foreign policy with its multitude of aspects; defining the strategic course of economic development; formulating unified

technical policy; determining the intensiveness and synchronization of the implementation of interconnected political and economic reforms; and, determining ways of developing the social division of labor and the unified nationwide market.

The imbuing of each union republic with sovereign rights at this stage will be accomplished along the lines of developing comprehensively the economy of the republic; reinforcing the social sphere for resolving on the spot all problems associated with satisfying the needs of the population and shifting many functions from the center to the local administration in this regard; and, delineating precisely both the income and the expenses of the republic and all-union budgets—the consolidation of sources of income, etc.

We return to the model of republic economic accountability. The creation of republic ownership via transfer from the Union to the republic is being declared. The authors of the concepts are making a gross error in equating ownership with property. Ownership is not a thing, K. Marx emphasized, but rather social relations that arise among people on the score of the acquisition of things. The acquisition of things is moreover not a legal term. The monkey also "acquires" a banana by knocking it off with a stick. The acquisition of things includes their production, distribution, exchange and consumption. In order to coordinate and bring order to these processes under the conditions of labor cooperation, they must be administered—disposal, possession, use. Administration is thus a function of ownership herein that can be accomplished by the subject of the ownership or transferred to others, lessees for example. The implementation of ownership that proceeds from Stalin's work "Dialectical and Historical Materialism" has apparently become thoroughly solidified in the educational process of the minds of the authors of these concepts with the force of preconviction, which has naturally not permitted them to approach the fulfillment of their task in strictly scientific fashion.

The appearance of this or that form of ownership is conditioned by the nature of collectivization of production. Marx and Engels clearly delineated two types of collectivization: economic and administrative-compulsory. The former is founded on a deepening of the division of labor. The latter is based on the willful directive nationalization of production. F. Engels called it Bismark-like, unable to accelerate the development of production. On the contrary, it turns into a serious impediment to it.

Many of our misfortunes today began namely with the fact that Stalin vulgarized Marxist teaching on the two types of collectivization, taking any nationalization of ownership to be its collectivization. The view that collectivization could be achieved by purely willful means ultimately prevailed soon after the death of Lenin. The authors of the basic principles of republic economic accountability, in declaring the creation of republic

ownership, have evidently not thought about the question of whether the level of actual collectivization of production corresponds to the boundaries of the republic, is less than them or, on the contrary, passes through the borders of the republic.

It is namely the differing levels of actual and real collectivization of production that explain the existence of the statewide social ownership as a system of economic relations operating across the whole territory of the USSR. The actual level of production collectivization at the same time gives rise to a variety of forms of socialist ownership: the ownership of labor collectives in the state sector of production, or cooperative, municipal or individual ownership. There is no republic ownership among them, as we see, since a level of production collectivization that would be self-contained at the republic level does not exist. An illustration of this are the objectively necessarily diversified ties of our republics with other republics in the unified national-economic system of the USSR. The Latvian SSR thus imports (in percentage of consumption) 48 percent and exports (in percentage of production) 44 percent of the volume of industrial output.<sup>12</sup>

The authors of the basic principles of republic economic accountability, the Concepts and the Law on Economic Independence are at least 40 years late in proclaiming republic ownership. This had to have been done in the second half of the 1940s. At that time the actual—and not the administrative—collectivization of production was self-contained to a significant extent within the borders of the republic, while the national economy could not satisfy even essential requirements and received considerable assistance from other fraternal republics.

In light of the aforementioned, the attempts of the authors of the principles of republic economic accountability for the LaSSR to introduce the term "unified national-economic system of the republic" into academic circulation are incorrect in an academic regard.

The term "unified national-economic system of the republic" could be employed only toward the RSFSR, and possibly the UkrSSR, out of the 15 republics that comprise the USSR. It is namely those republics that are basically able to provide for the process of reproduction through local sources of resources and the organization (if it were required) of technical production and economic ties within the republics. The more the republics are included in the system of the social division of labor, the stronger the national-economic system of the country, the fewer the objective conditions for autarky and the less ruinous the policy of separatism for the peoples of the republics.

So we move on to the second constituent element of republic economic accountability—the implementation of an independent internal and external economic policy of the republic with the other union republics on the basis of equivalent exchange.

In accordance with Article 6 of the USSR Constitution, the CPSU determines the course of domestic and foreign policy and guides the creative activity of the Soviet people. Such a role for the CPSU clearly does not sit well with the authors of republic economic accountability, but then they must propose an alternative solution to see that some organization ensures the academic level of that policy and a regard for the interests of all social segments and ethnic groups residing on the territory of the republic. But there are as yet no such alternatives.

The equivalence of commodity exchange has long troubled the minds of economists and political scientists in the country. With the centralized distribution (allocation) of resources and the effective absence of actual wholesale trade in capital goods, however, to inveigh for equivalence of exchange signifies trying to gain advantages for oneself at the expense of others.

Equivalence can be obtained only in value terms, which assumes the correspondence of prices to socially essential expenditures. But there are no such prices, because there is not as yet a developed market for goods, labor, investments or stock. The creation of a developed market in the future is thus a most important problem. The development of market relations that can be regulated (basically by the tax system) will be an objective criterion for the functional efficiency of this or that form of socialist ownership. Prices will nearly always deviate from value until then. Wherein prices for energy resources and raw materials, as a rule, are lower than their actual value, which is very advantageous to the republic, and prices for finished products are higher.

Wholesale prices for a ton of petroleum today are five times lower than world prices. The average wholesale price for a ton of coal for various basins of the USSR is 65 percent below world levels. The wholesale prices for metal structural items, raw materials for light industry and non-ferrous metals are much lower than world prices. Our republic, importing (in percentage of consumption) 93 percent of fuel, 90 percent of ferrous metals and 100 percent of non-ferrous, 77 percent of chemicals and petrochemicals, 62 percent of machine building and metalworking products, 27 percent of the timber, woodworking and paper-and-cellulose, along with 40 percent of the light and 28 percent of the food industries<sup>13</sup> and exporting finished products at higher wholesale prices, receives additional income. The balance of payments of the LaSSR, according to one calculation technique, has a positive net balance of almost a billion rubles a year.<sup>14</sup>

The economy that arises in exchange with other regions of the country has been used for many decades for the development of our republic social, cultural and consumer spheres. Today we live partly at the expense of the intensive physical and mental energy of workers employed in the extraction of fuel and power resources, the production of various types of metals and products of machine building, etc. The narrowness of the development of the social infrastructure in those regions was

caused to a considerable extent by the fact that the low wholesale prices for their products did not allow making the development of the social sphere on their territory dependent on the results of their labor.

The data on the economic development of the republic for a longer period of time show that even with the prevailing difference in wholesale prices, the cost recovery [*samookupayemost*] of the republic is problematical. Over a quarter century (from 1960 through 1985) the gross social product in the Latvian SSR grew by 3.88 times and national income by 3.9 times, while capital investment grew by 4.23 times and fixed productive capital by 5.79 times.<sup>15</sup> Whence it follows that the growth in fixed productive capital proceeded at more than the expense of republic resources alone. The difference could be covered only by resources coming in from outside the boundaries of the republic.

The authors of republic economic accountability are burning with the desire to incorporate it starting in January 1990 (how could we lag behind our neighbors!). But won't production in the republic be unprofitable in connection with the proposed rise in wholesale prices starting in January 1990? They will increase by 90 percent for coal, double for gas, 2.2 times for fuel oil, 2.3 times for petroleum as a raw material for fuel and chemical products, 25-30 percent for building materials and 40-55 percent for the rate scales for electric and thermal power.<sup>16</sup> Wherein we must think that the proposed rise in wholesale prices will not be conclusive. Another one-time and no less sizable increase for those goods will obviously be required to make them equivalent to world price levels.

If you figure that it will be possible to compensate for losses through a rise in wholesale prices for output expressed as the items of consumption, disappointment awaits you.

The social sphere is of course more developed in this republic than in many others. The proportionate share of Group B in the value of all industrial products totals 43 percent,<sup>17</sup> while it is an average of 24.4 percent across the USSR. The republic occupies first place among the other union republics in the production of non-productive goods per capita and second (after Estonia) in the production of foodstuffs. The rise in prices for consumption items in exchange among republics, however, will be limited by the fact that the other republics will naturally prefer to obtain higher-quality goods in the world market, the more so as the products of the light and food industries are cheaper in that market and equipment, petroleum products, gas, ferrous metals, etc. are more expensive.<sup>18</sup> It will be more advantageous for them to have access to the world market.

Finally, equivalent exchange is problematical under conditions of market relations when the degree of risk increases many times over. How will the republic be able to provide for a rise in production efficiency, a reduction in spending and an increase in product output when, first

of all, the sufficiency of fixed capital in industry and construction, which produces more than half of the national income of the republic, totals 88 and 76 percent of the level across the USSR respectively,<sup>19</sup> and second, when the obsolescence of that capital comprises 48 and 59 percent respectively,<sup>20</sup> while it totals an average of 40 percent across the USSR?

True, the capital-labor ratio is 51 percent higher in agriculture and 57 percent higher in transport and communications than the average for the country overall. The production volume of agricultural output, however, has increased by only 1.75 times from 1940 through 1987 due to irresponsibility and incompetent leadership, while it increased an average of 2.9 times for the country overall.<sup>21</sup> Some republic leaders are complaining that many types of agricultural equipment do not correspond to the soil and climate conditions of the republic, but after all the picture is the same in other regions of the country as well, but they have been able to increase production volume much more in those regions anyway.

All of these data show that the theoretical, technical, organizational and economic foundation of the conversion of the republic to economic accountability and providing for cost recovery is too shaky.

It is clearly too early to be talking about republic economic accountability. The discussion can therefore proceed not on economic accountability for the republic, but rather—as was emphasized in the meeting of M.S. Gorbachev with workers in the city of Kiev—on “restructuring the leadership of the economy and the social sphere in the union republics... The main thing here is the conversion of all enterprises and associations, regardless of departmental affiliation, to complete economic accountability, self-financing and cost recovery and the establishment of economically substantiated relations between them and the republic and local budgets. The republic budget should have at its disposal its own sources of income based on long-term standards.”<sup>22</sup> The discussion can thus proceed on a considerable expansion of administrative rights and economic responsibility of the union republic for the economic and social development of its territory.

Finally, the last component of the structural framework of republic economic accountability is a republic currency. There is no need to fan the emotions surrounding this issue by declaring this phenomenon to be unconstitutional. This issue is the fact that republic money is a utopia that is directed backwards in thrust. Only command-administrative thinking could have been able to create this myth.

A fundamentally new economic phenomenon that has not existed in our country since the monetary reform of 1947 has appeared under the conditions of an expanding shortage of goods and the rapid growth of potential, deferred and unsatisfied demand—speculative foreign-currency demand has appeared. To speak of a republic currency under these conditions means to fail to understand that money becomes

a universal equivalent only after it becomes a commodity the price of which depends on competitive market conditions.

Under conditions where the overall sum of money that has been issued to the population through various channels since the monetary reform of 1961 that has no commodity equivalent totals almost 250 billion rubles, any currency—checks, calling cards, photos, slats etc.—for which a commodity can actually be acquired becomes the object of buying and selling itself. And the higher the speculative demand, the higher the price of that “currency.”

The introduction of a republic “currency” will raise the nominal price of that “currency,” which will be a very strong blow to the consumption level of goods and services by the population of the republic. It would therefore be expedient for the authors of these ideas to focus their attention on developing measures to reduce shortages.

Today it is not the introduction of one’s own currency that is needed, but rather the development of extraordinary measures for 1-2 years so as not to allow the augmentation of negative trends or a worsening of the economic and social situation. The development of measures defining an expansion of economic reform for “entry” into the 21st century is what is needed today, since a leap forward in quality and a transition to a fundamentally new system of five-year leadership of the economy unknown in the past and based entirely on the utilization of economic methods are required. A system of measures for the more distant future associated with the implementation of an economic restructuring of a structural and investment nature that has never before been pursued in the country is what is needed.

It follows from all of the above that the faster republic economic accountability is incorporated apropos of the current state of the economy of the republic and apropos of the level of theoretical, economic and political preparation of the personnel of republic administration, the more quickly a decline in the standard of living of all ethnic groups of the republic will occur.

#### Footnotes

1. “What Do the Statistics Say?” 2 December 1988.
2. Ibid.
3. Ibid.
4. KOMMUNIST SOVETSKOY LATVII, No 6, 1989, p 30; SOVETSKAYA MOLODEZH, 22 December 1988.
5. SOVETSKAYA LATVIA, 3 and 4 June 1989.
6. SOVETSKAYA LATVIA, 11 June 1988.
7. SOVETSKAYA LATVIA, 16 October 1988.
8. Ibid.

9. LaSSR Council of Ministers Decree of 31 October 1989 [as published].
10. "LaSSR in Figures for 1987." Concise Statistical Handbook. Riga, Goskomstat, 1988, p 3.
11. SOVETSKAYA LATVIA, 19 October 1988.
12. KOMMUNIST SOVETSKOY LATVII, No 4, 1989, p 10.
13. KOMMUNIST SOVETSKOY LATVII, No 4, 1989, p 10.
14. KOMMUNIST SOVETSKOY LATVII, No 6, 1989, p 9.
15. SOVETSKAYA LATVIA, 5 February 1989.
16. PRAVDA, 27 February 1989.
17. "LaSSR in Figures for 1987." Concise Statistical Handbook. Riga, Goskomstat, 1988, p 9.
18. PRAVITELSTVENNYY VESTNIK, No 12, 1989, p 10.
19. "LaSSR in Figures for 1987." Concise Statistical Handbook. Riga, Goskomstat, 1988, p 5.
20. KOMMUNIST SOVETSKOY LATVII, No 7, 1988, pp 63-64.
21. KOMMUNIST SOVETSKOY LATVII, No 7, 1988, pp 63-64.
22. EKONOMICHESKAYA GAZETA, No 9, 1989, p 3.

**Society of Lithuanian Manufacturers Holds Congress**  
18200449

[Editorial Report] Vilnius SOVETSKAYA LITVA in Russian on 12 July 1989 carries on page 1 a 1600-word report signed by V. Yefimov entitled "Economics Is Also Politics." The article discusses the proceedings of what

was apparently the first congress of the Society [assotsiatsiya] of Lithuanian Manufacturers (date and place of congress not specified). Yefimov, who is a member of the group that initiated the formation of this society, writes that almost 1,000 delegates representing nearly 270 industrial enterprises, or approximately one-half of the republic's industrial potential, met at this congress. The congress elected a president and three vice presidents to head the society and formed an 87-member council, an information center, a judicial body, a commercial bank, and seven commissions. Rimvidas Yasinaivichus, the society's president and general director of the Vilma Production Association, stated in his address that "Lithuania will be independent only to the extent that each enterprise, share-holding society, collective, and individual producer are independent and effective."

Yefimov writes that in the interests of combatting central control, the republic's manufacturers decided to unite so that they could fight for rights officially granted by the Law on State Enterprises and by the USSR Constitution but which in practice are often circumvented. He notes that one of the association's main goals is to improve the legal conditions that affect enterprises. In a speech delivered to the congress, A. Brazauskas pointed out that collectives in union-level enterprises had initiated the formation of this society largely because the influence of administrative commands is most strongly felt in these enterprises.

The congress adopted two resolutions intended to counteract the adverse effects of central control. The first calls for an end to the system of state acceptance in Lithuanian enterprises. The resolution notes that the money saved by this action could be used for scientific and technological purposes. The second resolution calls for the abrogation of state orders for consumer goods, noting that they "counteract the spirit of the 19th Party Conference and the Law on State Enterprises."

Yefimov concludes his article by noting that many people have questioned whether the Society of Lithuanian Manufacturers might be considered a political force. He replies that it is "undoubtedly" one, but the society "is not, of course, a political party."

## AGRO-ECONOMICS, POLICY, ORGANIZATION

### Restructuring Socialist Relations in Countryside

*18240215 Moscow SELSKAYA ZHIZN in Russian 22 Jul 89 p 2*

[Roundtable discussion among scientists of the Moscow Agricultural Academy imeni K. A. Timiryazev, directed by N. G. Kopanov, editor of SELSKAYA ZHIZN's economics department, member of the editorial board and candidate of economic sciences: "Property. The Manager. The Market."]

Lines from the Shorthand Report:

- Perestroyka cannot confirm itself if we do not have a respectful attitude toward economic law.
- It appears that everyone here is interested in agriculture, but despite this everyone strives to put all of its income into his own pocket.
- The idea of the socialist market is being distorted by libertarian dogmatic resolutions.
- There must be a skilful coordination of large, mid-sized and small production.
- Do small peasant enterprises create serious competition for kolkhozes and sovkhozes?
- We need a restructuring of the financial-economic and tax system.

### The APK [Agro-Industrial Complex]—Management Mechanism

Today all of us understand well that the root of the growing tension in our society lies within the economy, and first and foremost within the food problem.

The March 1989 Plenum of the CPSU Central Committee has developed a new agricultural policy. In it a central place is occupied by the restructuring of socialist production relations in the village. What path will contemporary agricultural science and practice follow? How should the real manager of the land be educated? What is the role of property, of the socialist market in this? The meeting of SELSKAYA ZHIZN journalists with scientists from the Moscow Agricultural Academy imeni K. A. Timiryazev was devoted to answering these questions. Economists, philosophers, historians and scholars from different departments of the country's oldest agricultural educational institution participated in the meeting. The "roundtable" discussion was led by N. G. Kopanov, economic editor of SELSKAYA ZHIZN, member of the editorial board and candidate of economic sciences.

[Kopanov] SELSKAYA ZHIZN has had longstanding and good contacts with the Timiryazev institution. Scholars from the academy quite often appear on its pages discussing the most urgent problems related to APK development. The March 1989 Plenum of the

CPSU Central Committee has established the major directions for the development of the agro-industrial complex. I hope that during today's meeting we will discuss hindrances on the path toward developing a new economic mechanism, measures to eliminate these hindrances and various forms of property and the creation of conditions necessary for the development of a mature socialist market.

[M. P. Vasilenko, doctor of economic sciences, professor in the department of organization of socialist agricultural enterprises] When we speak about agricultural policy, in my opinion we must clearly discern three levels—strategy, tactics and efficient management. Unfortunately, we do not always adhere to this rule. Yet this kind of division is vitally important.

Due to the imprecise determination of the strategic direction something surprising has occurred in recent years—formally and in reports as well as in print it is stated that development strategy includes strengthening kolkhozes and sovkhozes as well as agro-industrial structures. Yet in practice all attention is focused only on leasing, cooperatives and the individual peasant enterprise.

I am not diminishing the significance of the lease, cooperatives or family and individual enterprises, but what is the main argument that is being put forth in support of them? It is said that the hired worker should be transformed into a manager. Let us remember the period when the private peasant labor enterprise was the basic form. Even then not everyone by far was a manager. One person could become a manager, another because of his characteristics could not.

The second argument in support of the private peasant labor enterprise is that this form will provide competition for the kolkhoz or sovkhoz. I think that this is a delusion because it is unlikely that this form will become extensive or develop on a mass scale.

I feel that the overall strengthening of the large socialist agricultural enterprise was, is and should be the strategic line.

This is our greatest achievement, perhaps at a cost and with some mistakes, but we did create the system. Why turn away from it? After all, even up until now kolkhozes and sovkhozes have not utilized even half of their potential.

They can demonstrate their strength under normal, and I emphasize normal, economic conditions, which have not existed at any time in our history.

[Kopanov] The opinion exists that kolkhozes and sovkhozes are a distinctive reason for all of our food failures...

[M. P. Vasilenko] I have also heard such assessments and understand all of their absurdity and the incompetence of those who think this way. How can we speak in this way if for a long time kolkhozes and sovkhozes were

simply robbed! Excuse me for using such a word, but this is the truth! It is only natural then that they found themselves in difficult circumstances. There simply could not have been any other result.

[Kopaney] Of course, kolkhozes were never allowed to be real kolkhozes, i.e., independent agricultural production cooperatives. And they still are not allowed to be this. We do not have to go far to find an example. A proposal was made at the 4th All-Union Congress of Kolkhoz Farmers to expand the application of the Law on Cooperation to kolkhozes. It would seem that the proposal is a logical one and deserving of all kinds of support. But first an attempt was made to dampen it and then everyone remained completely silent about it, as if it had never been made.

[M. P. Vasilenko] That is the problem. We were speaking about equal economic conditions, but the production cooperative has unlimited independence as compared to the kolkhoz. Where is the consistency? In addition, kolkhozes and sovkhozes have essentially become frozen in their development. I remain a thoroughly-convinced supporter of the development of kolkhozes and sovkhozes along the path of agroindustrial integration and of their cooperation with industrial enterprises. This is the strategy.

But I would also add that we do not need a one-sided approach. There should be a skilful coordination of the large, mid-sized and small enterprise. The large enterprise is like the arteries and veins. The mid-sized and small enterprises are like capillaries. All of them are necessary to the body. We cannot juxtapose them to each other.

[S. S. Sergeyev, VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], doctor of economic sciences, professor, director of the statistics department] I would like to discuss the question of what to emphasize as being most important, and especially the question of the main production relation—the property relation. I am speaking about the disposal of socialist property. I feel that public property has all the advantages over private. First of all this applies to the use of the achievements of scientific and technical progress.

The only question that arises is to create the conditions under which these advantages can actually be realized. In other words, kolkhozes and sovkhozes must be given independence. Within enterprises it is essential to create forms that will secure the economic interest of every worker and every collective as a whole in improving production.

Today we often hear calls to return the manager to the land! What manager are we speaking about? About the collective or the individual? I think that if the manager is an individual, then this is the experience of the past and a stage we have already passed through. We have chosen a different path of development—the public enterprise.

I think that we should seek the forms that will provide the opportunity for the collective manager-worker to maximally realize his potential. This depends on how successfully things are organized in the specific enterprise. We have not single but numerous examples of successful and consistent development of agricultural production output.

Unfortunately, we have tolerated administrative distortions. And this is why the collective manager does not feel himself to be one. Yet he has enormous potential as compared to the private peasant labor enterprise or the leasee.

The development of private subsidiary enterprises and their integration with public enterprises is also of enormous significance for replenishing food shelves.

[V. A. Dobrynin, VASKhNIL academician, doctor of economic sciences, professor, chairman of the department of agricultural economics] I have no doubt that our agriculture can feed the country. But we are not utilizing its potential.

Why? Stated briefly, we do not have the normal economic conditions for the functioning of kolkhozes, sovkhozes and other forms of enterprises. In this I agree with Professor Vasilenko as well as with Professor Sergeyev. What is the solution to this difficult situation? We have stated that perestroika is necessary. Yes, this is so. But perestroika was proclaimed about 4 years ago. However, we have not thrived on perestroika if we cannot admit that the situation has become more serious.

Political and economic reforms are needed to solve urgent problems. They are two sides of the same coin. Right now we are speaking only about one—the economic. But economic reform cannot manifest itself without political reform.

What is political reform? First of all we must decide the question of power—who should rule, who should be in command, and the question of property—who among us are property owners and how should we dispose of this property? But unfortunately neither the March central committee plenum nor the congress of people's deputies solved these problems; the administrative-command system has remained unshakeable. What can we juxtapose to it now? I think that it will have to be only the overall development of commodity-monetary relations and the socialist market.

We know that with the help of the market and of commodity-monetary relations we reached the 1913 level of agricultural production already by 1925, and that by 1928 we were able to double agricultural production.

Perestroika cannot confirm itself if we do not have a respectful attitude toward economic laws. Up until now they have been ignored or not utilized in the necessary manner. But objective laws manifest themselves nevertheless and threaten the society that has scorned them.

[F. K. Shakirov, candidate of economic sciences, lecturer, chairman of the department for the organization of socialist agricultural enterprises] When you read the newspapers you clearly hear the call—let's break everything up, tear it down, destroy it! But in doing this no one has considered that the epoch of general destruction has already been. And what it brought is well-known to everyone.

We are speaking about the economic mechanism, i.e., about the mechanism for utilizing our socialist economic laws. The fact is that we have not recognized these laws, have not developed them, but are already attempting to create a mechanism. Is it perhaps for this reason that the mechanism is not working here? After all, not laws but their common essence is being laid as the foundation.

For example let us look at commodity-monetary relations. Regardless of economic form we must deal scientifically in these matters. We talk about lease collectives, cooperatives, private peasant enterprises and so forth. Yet the basis for all of these management forms are cost accounting and commodity-monetary relations.

If we wish to understand questions related to property we must think through and determine who the property owner is in this case, whether it is the small primary collective or brigade. He must make a decision about acquiring all of the necessary means of production, and about taking them out of economic circulation, i.e., implementing self-development.

[V. P. Agafonov, doctor of philosophical sciences, professor, chairman of the department of Marxist-Leninist philosophy] Everyone who has spoken here before me has addressed, in his own way, the problem of objective economic laws, which cannot be scorned or interpreted subjectively. We will stand in place eternally if we continue to ignore the dialectic and to adjust everything to fit the citations of Marx, Lenin and so forth.

What I want to say is that we can always find a quote. But we must approach science and Marxism-Leninism dialectically and not dogmatically. Thus it happens that the concept of the market is distorted by libertarian, dogmatic theses.

In our country some men of letters, journalists and scientists who in general have correctly analyzed the history of the village have drawn completely incorrect conclusions—perhaps there was an objective basis and need for that massive violence against the peasants? Perhaps Stalin was correct from the point of view of historical conditions?

Lenin could not but have recognized the existence of other, non-violent methods of development. He saw that it was from a NEP Russia that a socialist Russia would develop; he saw the development of civilized cooperators. Why do we in our newspapers sometimes attempt to interpret Stalinist arbitrariness with regard to the peasantry as a historical necessity? This is intolerable.

Here is another case. From the very highest tribunals, including the pulpits of institutes, claims still resound that we are paying the peasants too much, that the village is receiving unearned money. I dare to state that this is lies and slander! The majority of village workers receive significantly less than city workers, and their living conditions are also much worse; there is as good as no mechanization in the household.

I agree with M. S. Gorbachev that we need gradual reforms, that we should not "jump over stages." But there are problems for which we simply cannot delay the solutions. For example, it is essential to put a veto on increasing prices. Can we delay this matter until tomorrow? We must do this today because we may lose control of the situation. Recently I read a paragraph in KOMMUNIST—a retiree raised a young bull and submitted it, but he cannot receive payment for several months because the kolkhoz does not have any money.

Why do things like this occur? Because kolkhozes and sovkhozes have been forced into debt due to inordinately high prices for industrial products, fertilizer and services. Indecisiveness and indeterminateness in implementing an agricultural policy will result in the fact that tomorrow millions of peasants will not fatten these very same young bulls and hogs and will cease to recognize the principles of contractual relations, which are not being met. I emphasize once again that there are many problems that require an immediate solution without any reservations related to "jumping over stages."

[A. G. Shmakov, doctor of economic sciences, professor in the department of political economics] I would like to discuss ownership. This is the most important question today. In connection with this the need arises for the appearance of a manager—whether private or collective. As to whether it is an individual or private manager, here things are more or less clear. But we do not have a collective manager. We have not trained one. Why? Because the classical concept of property has been transformed into a definition and has become a means of administrative-command management of the country's entire economy.

It has already been correctly stated here that the strength of socialism lies in the fact that people and collectives are the managers of the means of production. But we have not made the collective a manager. We have transformed vital collective teaching about property into dogma. It seems to me that right now the most urgent problem in the scientific organization of socialist production is the determination of the place of the collective manager.

Collective ownership, if it leaves room for creativity and if through individual incentives it stimulates the worker and actually attracts him to production management, provides enormous possibilities for the development of production forces.

Take any branch. For example we have poultry raising, in which colossal economic effectiveness has been achieved. We have surpassed Food Program control

figures in per capita egg production. How have we achieved this? A stable material base, scientific-research institutes and large enterprises have been created. Of course, we have had the aid of state capital investments. Here we have a classic branch which gives us reason examine the path towards the development of other branches in the same manner. Then production output can be developed in large, mid-sized as well as small enterprises, with particular emphasis on private enterprises.

This refers to grain production and livestock raising as well as to sheep farming and so on. A special approach is required for the reproduction of soil fertility. Each branch needs its own material base and within it there must be a scientific-production system.

[A. S. Ivanov, chairman of the department of political economy, candidate of economic sciences, professor] Mikhail Pavlovich Vasilenko began with a discussion of strategy. Then we moved away from this topic. I feel that it is our strategic task to develop extensive agricultural production.

[Kopanev] As emphasized at the central committee plenum and at the congress of deputies, all forms of management and all forms of ownership must develop freely, all things being equal...

[A. S. Ivanov] Yes, I agree. In competition they will exhibit their vitality. But as a political economist I look at the problem from a historical perspective and I have not found a single management system in which, no matter the degree of pluralism and the multitude of forms, there is not a main and predominant form. For this reason, and above all for the further development of our agriculture, we must clearly outline for ourselves a socio-economic model for such development.

[Kopanev] Of course we must know what we are building and what we are tearing down and what we are rebuilding. Otherwise we might break the support beams.

[A. S. Ivanov] In connection with this I think that the shortcoming of many recent decisions involving agriculture (and unfortunately this applies to the decisions of the March plenum as well) lies in the fact that the concept of agricultural development in our country is inadequately formulated. Because of this we have a wavering among economists, who previously saw this model fairly clearly.

Nevertheless, in my opinion a completely correct conclusion has been drawn that our problems are the result of the alienation of the worker from the means of production. There is alienation from ownership, alienation from labor and alienation from power. This problem applies equally to the city and to the village. It is only when the discussion turns to agriculture that the problem of the manager is sometimes couched in such romantic terms. The question of the rebirth of the

peasant under contemporary conditions does not mean a return to that past peasant. We must develop a manager on a new basis.

Thus we have the urgency of the problem of ownership. Property relations must be structured and should provide each production unit with sufficient property rights. It is this that we do not have now. If in our country we lost the forms for disposing of property on the level of the enterprise, subdivisions and so forth, the attitude toward the disposal of property on the national level was undermined even more as democracy was violated.

[Kopanev] In other words you wish to say that the absence of democracy resulted in the fact that the regular worker is deprived of the opportunity to realize his function in terms of national property?

[A. S. Ivanov] This is completely correct. The new agricultural policy is the same well-known Leninist agricultural policy, and we are called upon to rebuild its foundation now. How we do this is a strategical question which, as I have already stated, has remained unclear even after the March plenum.

[P. P. Dunayev, doctor of economic sciences, professor in the department of agricultural economy] There is as of yet no comprehensive approach to dealing with the problem of APK development. Let me stop at the protection of the economic and legal interests of APK partners. It appears that everyone is concerned about agriculture here, but at the same time everyone is striving to transfer income from agriculture into his own pocket.

Even the older generation, that same Veprev with the Gold Medal of Heroism, cannot withstand the struggle for one's rights. With his chest he is trying to keep the grain, which costs 6 quintals per hectare, in his enterprise's own granaries, yet the mixed feed that is made from it costs him several times more. Today the manager cannot either buy or sell advantageously because conditions dictate to him. Please note, he is not doing the dictating, things are being dictated to him.

In other words, first of all he has lost interest in production development. There is also no interest in the land and this is why we know at what level he is maintaining soil fertility.

Or look at the interests of the enterprise's director. It is very important to protect him from the arbitrariness of the top administration.

We must focus the attention of the higher school on teaching the art of economic thought to specialists. Today those who have skilfully assessed the economic advantages of the integration of agricultural production with the subsidiary works, who have organized the processing of field and farm products and who work not by order but creatively, with a calculation of advantage, are working steadily.

[G. I. Budilkin, director of the All-Union Higher School of APK Management, chairman of the department of

**agricultural production administration, doctor of economic sciences, professor]** I agree with the speakers that the decisions of the March plenum do not include a sufficiently clear and precise concept of agricultural development, and this is why locally the concept is interpreted with maximum convenience to themselves. Here we see a lack of desire on the part of the city to turn toward a large-scale solution to the agricultural problem.

In speaking about the concept on the one hand we must stand firmly on the foundation of existing reality and on the other we must see where this reality will bring us in the future if we do not begin to modify it. And the reality is that 70 percent of agricultural products come from kolkhozes and sovkhozes, 24 percent—from private subsidiary enterprises.

I support a variety of management forms. But in developing the peasant enterprise and individual leasing we are placing our hopes in tomorrow. When will tomorrow come? We must feed people today. The kolkhoz, the sovkhоз, and the private subsidiary enterprise have existed for decades and already today are supplying the bulk of market goods. Of course these management forms require their own internal development on the basis of complete intraenterprise accounting, lease relations and the transformation of cooperatives into cooperatives.

And still we must recognize the strength of the kolkhoz form of management, which even with our mismanagement, with purposeful destructive activities by departments with respect to the agricultural sector, is still functioning successfully. Yes, new ownership forms are needed, but we must also thoroughly analyze the existing economic mechanism and only then create a new one. We must strive to make sure the economic mechanism provides equal development conditions for all forms of management.

How can we speak about the effectiveness of large-scale production if we give the cooperating member or the licensee complete freedom in planning and the sale of products while the kolkhoz or sovkhоз does not receive this?! Right now the entire government sector has turned out to be limited. The directors of enterprises are requesting not so much supplementary resources as complete freedom of management.

Since we have begun discussing the coexistence of various forms of management, and they are now the norm for the functioning of our system of socialist production relations (I emphasize this), we must equalize them in terms of rights. Only then will the economic responsibility of the collective for the results of labor be complete; only then will the conditions be ripe for the manifestation of cost accounting itself.

Or let us take the development of the subsidiary enterprise, which in our country supplies 24 percent of agricultural products. In socialist countries it has been put on the level of government policy. Idle talk has paralyzed us—we talk and talk, but we are not doing

anything realistic for the government sector, kolkhozes or subsidiary enterprises, i.e., for the sector from which we really can obtain the products. At the same time for the last 1.5 years all discussions on ways to develop agricultural production have focused only on cooperatives, leasing and other new forms, as if other sources of development do not exist.

As a result, party, soviet and economic workers, especially in production, have developed the firm impression that a gigantic pressure campaign is again in effect.

**[Yu. S. Balandin, lecturer in the organization department, candidate of economic sciences]** We must pose the question specifically—at the given moment with the given level of development of production forces what size enterprises or production enterprises are optimum? Abroad small enterprises and farms successfully utilize modern equipment and technology and achieve greater economic results than our leading large enterprises. It is true that some of our kolkhozes and sovkhozes which are managed by talented directors have had considerable success. The majority of enterprises received sufficient capital investments and nevertheless did not achieve the necessary growth in effectiveness.

If we leave kolkhozes and sovkhozes in the shape they are in now it will be difficult to achieve economic reform. In this shape they will not be able to accept new forms of management or economic cooperation and will hinder the development of commodity-monetary relations and self-management.

**[Rejoinder]** Kolkhozes and sovkhozes!? Why?

**[Yu. S. Balandin]** Because they essentially are the lowest link of the stronghold of the administrative-command system.

**[Kopanев]** This is a curious formulation of the question.

**[Yu. S. Balandin]** We need new economic foundations, new forms of management to encourage peasants to realize a feeling of responsibility. Of course if we view leasing as a regular campaign that can be implemented in just a few years, then we cannot believe in such a lease system. This is why I was happy to hear the remarks of Mikhail Sergeyevich Gorbachev at the congress of people's deputies concerning the fact that we must examine the transfer of resources for the purpose of leasing as a process that must gradually encompass all aspects of the agroindustrial complex. The core of this process is the attitude toward property.

And if the matter concerns property then haste is dangerous. The question, "Why is leasing proceeding slowly?" is advantageous only to those who are impatient to more quickly submit a report that they have completed the establishment of a leasing system. But leasing has not yet had time to enter the consciousness of people. Administrative obstacles which are closing the road to lease relations have also not yet been removed.

Management of agricultural enterprises on the level of the rayon and higher is a special subject. Today's agroindustrial combines and associations are essentially the same administrative command forms. They will disappear only if all agricultural enterprises make a transition to leasing after concluding a contract with the organs of Soviet power. In this way they will receive real economic freedom.

[M. P. Vasilenko] I agree with the fact that as a management form on the rayon level the agroindustrial combine is not suitable. But as a form of production organization it is excellent.

[Rejoinder] Now it has been transformed into a management form on the rayon level.

[V. A. Dobrynin] As regards Yuriy Sergeyevich Balandin's remarks I think that leasing should not be presented as a magic wand. It cannot be the strategy in production development in our country. It is a tactical measure that enables us to enliven production somewhat.

[A. P. Zinchenko, dean of the economic department, doctor of economic sciences, professor] Of course large-scale production has more advantages. There is no doubt about this...

[Reply] Nevertheless many people do doubt it.

[A. P. Zinchenko] They do doubt it, because its advantages have not been utilized. On the other hand look at the GDR, Czechoslovakia, China and Hungary. There successful experiments are being carried out with various forms and the problems are being solved. We cannot move away from this experience. It speaks of the need to revitalize the feeling of manager.

But what is a "manager"? It seems to me that we have not yet clarified this for ourselves. This is a dialectic concept and I am in complete agreement with Aleksandr Serafimovich Ivanov that we have not yet cultivated the contemporary manager. To do this we must economically provide for the drawing together of collectives and individual workers at different levels for managing, utilizing and distributing property.

There is a certain narrowness in the decisions that have been made concerning the new agricultural policy. It seems to me that a change in production relations and a bringing together of the worker and the means of production as well as the results of labor in agriculture will not occur until we accelerate the solution to given problems immediately in all spheres of the country's national economy.

For the last 60 years the slogan "Industrialization and urbanization" has been a priority. The village resident sees that that future lies in the city and not in the village. When 85 percent of the population lived in the village this slogan was needed. Today only 30 percent of the population lives in the village, and in some places even less. At the 19th party conference it was emphasized that

it is essential to achieve social equality in the development of the city and the village. We will be allowed to implement this through the integration of village territory, comprehensive development in the village, the coordination of various management forms, and the organization of equal small, mid-sized and large enterprises.

[Rejoinder] Yes, that's right!

[A. P. Zinchenko] Take the experience of M. G. Vagin, what is his foundation? It consists of uniting agriculture with industrial enterprises and subsidiary trades. In my opinion in this area the interesting aspect is the experience of Czech cooperatives and of the German Democratic Republic. In the GDR probably the strictest administrative-command system is coordinated with very sensitive, intelligent economic relations. But we are poorly acquainted with the achievements of other countries, and as a result we prepare specialists poorly. We must study foreign experience also in order to create our own concepts and not just to accept those that have been invented by someone else; we must have a competent approach toward innovation.

[Kopanov] Truly, sometimes we reinvent the wheel instead of studying existing experience.

[A. P. Zinchenko] This is why we grasp at one thing and then at another without bringing matters to a conclusion. Since 1983 we have been introducing collective contracts, now we have started a campaign for leasing...

[Rejoinder] But we have destroyed contracts!

[A. P. Zinchenko] Well, we cannot say we have destroyed them, but that we have just moved forward somewhat—we are now transforming them into lease contracts, developing different cooperatives, and altering economic relations between APK enterprises and industry. But monopolies exist as before, as does inequality. And we scholars are also not looking very far into the future. The attitude of party organs toward agricultural management is also not changing seriously. Economic relations remain as before. They can be changed only on the basis of serious political decisions.

Along what path will kolkhozes, sovkhozes, lease relations and cooperatives develop? What is collective property? Many other questions require a prognosis. This includes joint-stock companies, which are still being utilized very timidly. Scientific research and the studies made in our country and abroad will help us to accelerate the perestroika processes that are still proceeding slowly.

[Kopanov] The discussion has been a constructive and useful one. We tried to find ways to create and develop the country's food complex. There is a great deal of difficult work ahead. Many branches of the national economy are included in it. The "roundtable" discussion clarified the factors that are complicating the implementation of agricultural policies in all their contradictoriness. The basic theme that could be heard in all of the

remarks was the question of the attitude toward property. One thing is clear—without an answer to this question it is not possible to have a rebirth of a manager on the land.

The creation of the conditions for the development of a socialist market requires a restructuring of the financial-credit and tax systems, a transition to new principles of price formation and an end to monopolies. All of this must be done in addition to the elaboration of correct approaches to property, to the education of the manager.

Our discussion convinces us once again that the path toward solving the food problem lies in further democratization, the sovereignty of soviets, and the freedom of the village goods producer via a variety of forms of property and management.

### Tula Obkom First Secretary on Agricultural Leasing

*18240224 Moscow TRUD in Russian 9 Aug 89 p 2*

[Article by Tula CPSU Obkom First Secretary Yu. Litvintsev under the rubric "The Village: The Return of the Proprietor": "The Spring of the Lease"]

[Text] When they ask if the village will be able to feed the country, they have in mind more than just enough food on the table. The "state of health" of all of society is reflected in the life of our village as in a mirror.

There have been no few attempts to introduce dynamism into this life. But the least attention of all therein was devoted to social problems—it was felt that the rural resident had no pretensions, that he would wait. The distortions and imbalance in the development of the city and the village were manifested especially sharply in the Tula non-chernozem village. Priority industrialization, the rate of which at first evoked pride, overstepped all sensible limits and led to the fact that only about 10 percent of the able-bodied population remains in the village today. And here they erected monumental animal-husbandry complexes and constructed grandiose land-reclamation systems instead of creating conditions for the normal life of people.

There is no argument that these facilities are not important. But they are, after all, a means and not an end. And thus they cannot solve the economic problems of the village in and of themselves: the shortage of workers and skilled specialists. This was the inevitable payment for the illusory "economy" of funds, when they frequently "severed" everything in those projects that was associated with culture or the infrastructure of everyday peasant life.

Today there are calls to pay back the debt to the village. But how, in what form, will this be accomplished? In my opinion, the March (1989) Plenum of the Central Committee of the party answered these questions quite fully and, the main thing, in competent and constructive fashion. They answered with a new and non-traditional

agrarian policy founded on a drastic restructuring of socialist productive relations.

The process of democratization that is unfolding widely across the country—a striking expression of which was the 1st Congress of People's Deputies, whose resolutions included the appeal of the agrarian deputies that so excited the deputies—is imparting new impetus to the resurrection of the village.

The Tula people have made their contribution to collective inquiry as well. We have developed a series of balanced comprehensive programs and defined the paramount tasks, taking capabilities into account along with requirements. The most important among them are the programs for social reconstruction, the uplifting of 100 lagging farms and the mechanization of animal husbandry. I will cite the first results. The level of comprehensive mechanization of the dairy-farming farms has reached 80 percent. Capital investment in the development of the social sphere in the village has increased by 20 percent in the current five-year plan.

Many conflicts have arisen in the conversion to the development of farmstead homebuilding. Some managers have tried out of habit to scrimp on the comfort and convenience of rural housing. What kind of a peasant home is it, they say, without a haze over the chimney? They went ahead, they tried it with the "haze." But a problem arose. The ovens smoke mercilessly with the local coal—with an ash content of up to 40 percent or more—and provide no heat. People understandably fled such "comfort."

We rejected the temptation to start building single-story "boxes" with a minimum of amenities in the village as fast as possible. We chose a more difficult route: the housing should be in no way inferior to urban housing, or should even surpass it. This required both large expenditures and great efforts. But on the other hand, migratory processes were slowed appreciably. It is, of course, not a matter of steam heat or a steam bath alone. The rapid gasification of the village, the development of a network of hard-surfaced rural roads and the strengthening of consumer, trade and medical support are underway. We see this strengthened "social immunity" of the village as one of the main areas of work for the local trade unions.

Various types of bureaucratic barriers, it is true, are impeding us here as before. It was decided, for example, to provide the farm with its own medical station. The kolkhoz is even ready to pay the wages of the medical personnel itself. But it did not work out—the number of residents did not make the norm. But are there many of the depopulated villages that do "make it"?... There are enough of these kinds of canned "standards" left over from the old days on the path of rural restructuring. We have to waste no little time and energy on this fight against the stereotypes of yesterday.

Enormous funds have already been invested in the villages, but today the peasant world is disordered all the

same. And there will be no harmony in it until we change the attitude of the person toward the job. The spirit of the day laborer did not arise in and of itself—it was formed both by the everyday disorder and by the transformation of the worker into an unthinking executor of directives. Do the working conditions and incentives facilitate initiative and enterprise? Is the worker satisfied with his job and his results?

The circle of these questions has become the point of departure in the restructuring of the agro-industrial complex. We did not proceed from the armchair creation of forms, but from life itself. We got advice from people and scrupulously studied the experience accumulated in the country. We arrived together at the idea of the utmost development of leasing.

The collective of the Zybino Pedigree Livestock Farm became a pioneer in the new cause. All changes here occurred not only with the knowledge and approval, but also with the active participation of every peasant. It was namely that circumstance that has emancipated peoples' thinking, awakened a spirit of creativity and reinforced responsibility. They first assimilated the collective contract on the farm, and then moved to wage payments out of gross income. The cumulative experience served, figuratively speaking, as a good leavening for leasing, which soon became the chief method of operations for subdivisions on the pedigree farm.

Today they are coming here from all corners of the country for the experience. They often ask the proprietors how we were able to combine the personal interest of the lessee with the collective farm. The answer is self-management founded on principles of cooperation. The farm is today essentially a cooperative of lessees, each of whom conducts business using his own mind, adapting with common sense and to advantage. The concepts of "mine" and "ours" are united on this economic basis.

I note that it was important not to assimilate leasing approaches in some separate section alone. The aim was to combine organically the creative nature of the new method and spirit of independence with prevailing operational economic practice and the technological structure. Using this experience, we also obtained an answer to the question of the fate of kolkhozes and sovkhozes. The lease is the water of life, able to give new life to the large cooperative farms.

The new economic relations in production also required a restructuring of the management echelon at the rayon level. The first to decide on this step were the workers of Novomoskovskiy Rayon, where an agro-industrial association [APO] today known to the whole country had been formed. The APO gathered farmers and animal breeders from the kolkhozes and sovkhozes, workers in the processing industry and construction workers under a unified cooperative "roof." A council headed by the chairman of the well-known Kolkhoz imeni V.I. Lenin and corresponding member of VASKhNIL [All-Union

Academy of Agricultural Sciences imeni V.I. Lenin], V.A. Starodubtsev, manages affairs. The council has a small administrative apparatus subordinate to it that fills orders for technical, financial and economic support. The enormous staffs of the RAPO proved unnecessary.

They began the restructuring of relations of the farms in a sphere that has elicited particularly many complaints in Novomoskovskiy Rayon. The discussion concerns the services of technical, agro-chemical and construction support, material supply and the processing of output. All of them have also become cooperatives. They are managed by councils in which are included on an equal basis—more precisely, elected—the chairmen of the kolkhozes and the managers of sovkhozes and the former services.

Matters even reached the oblast management echelon. The optimal solution was once again suggested by the logic of restructuring. A decision was made to form an oblast association of kolkhozes, sovkhozes and inter-sector cooperatives. This first association in the country to receive the name of Agropromsoyuz [Agro-Industrial Union] was founded at the beginning of the year at a meeting of their authorized representatives.

Some skeptics, without thoroughly investigating the essence of the changes, are asserting that the Tula people are still limited to a conventional "change of signs." The nature of this sort of disbelief is largely natural. The abundance of cosmetic reforms has given rise to a persistent (and mass) syndrome of a skeptical attitude toward innovation. Practically every new matter is perceived as an attempt by the bureaucracy to change its clothes. Today's processes in the village, however, have nothing in common with the prior games of the apparatus. Agropromsoyuz is a democratic and voluntary association. It performs the function of supporting the farms, not commanding them. It is namely this that is the fundamental distinction from the former agro-committee engaged in administration.

The new association has its own apparatus as well. It has 114 people—two thirds fewer than were in the agro-committee. But the issue, you understand, is not the quantity of administrative types, but rather their role and place. The creation of Agropromsoyuz has for the first time in deed ensured the principle of the apparatus in the name of the interests of the producers, and not the producers in the name of the interests of the apparatus. That is the main thing, and the rest, as they say, is to come.

We are not trying to rush the new approaches. It is important to strive to see that the process not stop, not become frozen. Both convincing examples and a method of gradual assimilation of new forms of economic operation are needed here. This is the surest way toward their affirmation. Today 315 of the 414 farms in the oblast have converted to a check system for monitoring expenditures, while 190 are making use of elements of leasing.

Some 12 farms were completely converted to the new relations last year, and 90 will do so this year.

All of this serves as a real basis for work in the new manner. And how the conditions are used depends on the enterprisingness of the executors. Unfortunately, not all managers and specialists have proven to be up to it. Some were frightened by the independence, to which they were not accustomed, and some would have no objections to turning back. There are opponents of the new approaches among the peasants as well. Unwarranted leveling and guaranteed pay for years have nurtured a psychology of dependence and passivity. But all the same it is not these sentiments that count. The advocates of the old are sitting off to the side while the new is energetically blazing a trail for itself.

A couple of words on what the restructuring of the agro-complex has given to the oblast already. Over three years of the five-year plan, labor productivity in the agro-industrial sector has risen by 25 percent, and average annual gross output volume has increased by 18 percent. Almost half a million tons of grain, over 200,000 tons of sugar beets, about 40,000 tons of meat and 110,000 tons of milk above and beyond orders have been delivered... The increase, by the way, was achieved for the first time with a significant reduction in the "muscle" power of bosses. They used to help with the plowing, the sowing, the mowing, the reaping, and even sometimes with milking the cows. Today the need for help from the bosses even during the peak harvesting days was reduced by a third, and many farms now manage entirely using their own manpower.

But chiefs, I note, are not being curtailed, but are simply moving to another plane. The city is learning to help the village not with "landings," but with deliveries of new technology and equipment for farms and construction. It is namely in the combination of leasing relations with scientific and technical progress that we see a real reserve for the most rapid possible resolution of the Food Program and the social resurrection of the village.

## MAJOR CROP PROGRESS, WEATHER REPORTS

### Lack of Preparation, Interest in Grain Harvest Hit

18240216 Moscow *PRAVDA* in Russian 22 Jul 89  
Second Edition p 1

Editorial article: "What the Fields Have Given Us"]

[Text] The summer harvest calendar is moving with surprising speed. The harvest schedule is a severe one. The fields will not forgive hurried work, but delays will result in harvest losses.

The grain "influx" may become an "outflow" if we do not harvest completely everything that we have in the fields. The golden fields in and of themselves do not yet

constitute real grain. We are noting this once again only because the "experience" of decreasing this product by half through mismanagement has been too enduring and tenacious.

The calling cards of harvest operations are the skilful assimilation of these operations by participants in economic methods of management and the use of new forms of labor organization. In Orenburg Oblast family harvest teams are setting the pace. In Orel Oblast interfarm harvest complexes, the great advantage of which is their mobility, are in operation in most regions. Wages for the "harvesters" in collective harvesting detachments in the oblast have been made directly dependent on work quality. For each ton that is harvested the machine operator receives up to 3 rubles together with supplements and bonuses. In addition, he is allocated grain.

But there are many places in which lack of responsibility, equalization of wages and a lack of incentives exist. People are not interested in and do not have the desire to work better, to give the fields a closer "shave." In the Kalmyk ASSR the combine operators of a number of enterprises continue to be paid "according to distance traveled," thereby providing incentives for the uncontrollable chase after hectares regardless of how much grain finds its way to the bunker.

There is no more effective way to struggle against losses than to shorten the harvest schedule by means of avoiding idleness of equipment. Contract and lease collectives are particularly interested in this. They work precisely from the first days of the harvest in the Turkmen SSR, Saratov Oblast and Stavropol Kray. However, directors, agronomists and economists of many enterprises of the RSFSR's Non-Chernozem Zone and of the Ukraine have taken on the role of outside observers in assimilating cost accounting in harvesting. In Voroshilovgrad Oblast, for example, on the eve of harvesting operations an entire series of problems came to light. A. Shcherbak, senior engineer of Kolkhoz imeni 22 Syezd KPSS of Kremenskiy Rayon, "forgot" to send for spare parts in good time, and as a result grain-harvesting equipment was prepared for entry into the fields who knows how. In Troitskiy, Starobelskiy and Stenichno-Luganskiy rayons an average of 4-5 combines were not repaired at all due to the shortage of machine operators.

In some places harvesting operations die down without having reached a peak due to an unheard-of "fuel shortage." A fuel shortage has developed for different reasons. In the kolkhozes and sovkhozes of the Voroshilovgrad region fuel was available but no one took it upon himself to distribute the coupons for the quarter. During the most responsible period the Kherson Petroleum Processing Plant closed for renovations. With this decision the harvest conveyor of many rayons in Nikolayev Oblast was given a death blow.

In his letter, A. Nurzhanov, a driver from Kazakhstan, called the current harvest period a time of "unheard-of

wonders" in his letter, which sounded like a cry of despair. "Due to the shortage of threshing floors and elevators," he states, "grain must be shipped hundreds of kilometers. Frequently during this long trip up to 8-10 percent of the wheat is lost from the vehicles."

A grain inspectorate does exist in the country, but it does not sound the alarm, does not come to the defense of grain farmers. Today we must also discuss bringing grain-reception points as close as possible to grain-processing enterprises and kolkhozes and sovkhozes and reducing "losses en route" between fields and storage facilities. The way to do this best is demonstrated by the experience of Stavropol and Don. Turning away from gigantomania, here they have chosen to follow the path of mass "determination of circulation" of elevators and milling facilities.

Several years ago Sevkavelevatorspetsstroy [Northern caucasus special elevator construction association] developed a technology for the accelerated construction of mechanized grain storage facilities and mini-elevators in "connection" with mixed-feed plants; however, the extensive dissemination of experience is being hindered by supply barriers. The technological "filling" for new objects is in extremely short supply.

The virus of indifference is alive. In a number of rayons of Kalinin Oblast workers just cannot seem to get started on attacking rough country roads. Many roads in Ryazan, Yaroslavl and other oblasts of the Non-Chernozem Zone have not been "brought up to par" for the beginning of the harvest. USSR Minvodstroy [Ministry of Hydraulic Engineering] is being especially slow in this kind of work.

We know that the harvest is of general concern. The partners of the farmer are also responsible for it. But what an odd thing—at the height of the harvesting work, when you cannot even approach a combine operator to say two words to him, you see machine operators cooling off in the shade! The reason for this is well-known—the technology is letting them down. Due to breakdowns hundreds of Don-1500 and Niva combines are idling. Colossal losses of work time and grain arise because somewhere along the plant conveyor, let us say this openly, careless work is being done. It is time to deal with Gomel, Rostov and Taganrog combine builders—what is the reason for the unflattering reknown of their machinery, and what must be done to correct the situation?

There are no secondary problems during the harvest period. Right now the most important task is to halt all grain losses without exception. Every manager, transportation worker, supplier and ministry and department worker must constantly sense his participation in the fate of the harvest.

## AGROTECHNOLOGY

### Biotechnology Applications Viewed by VASKhNIL Academics

18240229 Moscow SELSKAYA ZHIZN in Russian  
1 Aug 89 p 2

[Article by V. Shevelukha and L. Ernst, academicians, VASKhNIL]

[Text] Biotechnology is today making it possible to solve complicated problems of science and agroindustrial production. A great deal of attention is being paid to its accelerated development in many countries of the world. The article below tells about the status and prospects for use of its advances in our country.

In certain stages of its development, basic science achieves such qualitative changes that powerful breakthroughs into practice are inevitable. At the same time, a fundamentally new methodological level of thinking is shaped, the base is laid for a revolutionary restructuring in the organization of production and its technology. That is what has happened with the most recent directions in biotechnology, which today is authoritatively invading all fields of knowledge, the economy, and commerce.

The need to use the advances of contemporary biology is immense. It is dictated by the state of affairs created in agricultural production, by the acute need to solve the food problem in the USSR more rapidly. The unstable course of development of the APK is advancing as a strategic problem of science the need to intensify production and increase its stability, to reduce considerably the impact on it from frequently recurring droughts and other adverse environmental factors, to guarantee a sharp reduction in the loss of the harvest in all stages of production, storage, and processing. And one of the decisive factors in that effort is to create fundamentally new plant varieties and hybrids, new animal breeds, new strains of microorganisms possessing higher stability to the stress phenomena of the environment and capable of yielding output even under those conditions.

Today, this task is mainly being solved by the methods of traditional selection. The achievements of selectionists, especially with respect to creating biological entities with high potential productivity, have been quite important and are widely known. Many present-day domestic varieties and hybrids have a potential of 100 quintals per hectare or more for grain crops, 800-1,000 quintals for potatoes and sugar beets, 8,000-10,000 kg of milk per year for the best breeds of dairy cattle, and selected strains of microorganisms are capable of accumulating as much as 60-100 kg of biological nitrogen per hectare planted in a single season.

The world-class achievements of the selectionists V.S. Pustovoyt, P.P. Lukyanenko, V.N. Remeslo, B.P. Sokolov, A.P. Shekhurdin, and V.N. Mamontova are today being supplemented by the important results of

scientists who are hard at work—I.G. Kalinenko, D.A. Dolgushin, Yu.M. Puchkov, S.F. Lyfenko, E.D. Netevich, S.I. Grib, N.A. Rodina, V.N. Musich, and S.P. Zykin. But very little advantage is being taken of the high potential productivity of the new plants, animals, and microorganisms. The reason for this lies not only in shortcomings in the organization of agricultural production and departures from the technological discipline on farms, but also the poor genetic stability of the biological entities. That is why reconstruction of varieties and hybrids of agricultural crops, animal breeds, and strains of microorganisms is an important task of contemporary science, above all of genetics and selection.

The problems are especially acute in creating varieties of wheat, barley, corn, sunflowers, cotton, feed crops, fruits, vegetables, and other crops that will be stable to drought, diseases, and pests. Use of the present-day methods of biotechnology, genetic engineering, and cell engineering may have new potential for creating stable biological entities. Without overestimating their role, without setting them up against the traditional methods of selection, but in combination with them, it is possible, as shown by world and domestic experience, to greatly speed up the performance of this task and even in the next several years to achieve notable results.

Molecular and general genetics, the patterns of genetic transformations discovered by science, that is, changes in the heredity of organisms through deliberate transfer of allogenic genetic material into the cells of plants, animals, and microorganisms and also through artificially guided mutations, are the theoretical basis for developing the new biotechnological methods used in selection. Biotechnology laboratories of the country's selection centers are receiving new initial material of wheat, barley, potatoes, alfalfa, clover, sunflowers, and rape which is distinguished by high stability to drought, soil salinity and acidity, and dangerous diseases and pests. For instance, the barley variety "Odessa 115," which is highly productive and resistant to drought was obtained for the first time by the methods of biotechnology in the All-Union Selection Genetics Institute and regionalized in 13 oblasts of the country in a third of the time that traditional selection takes; the All-Union Rice Scientific Research Institute developed a rice variety "Biorice," distinguished by a high-quality kernel, which is stable to salinity and diseases. New resistant forms and varieties of potatoes, spring wheat, clover, alfalfa, and other crops obtained by the same methods and equal in productivity to the best regionalized varieties are now being tested.

New opportunities are opening up for selection. Specialized biotechnology laboratories have been created to take advantage of them, 14 interdepartmental biotechnology centers have been organized, within them the leading institutes and teaching institutions of the USSR Academy of Sciences, VASKhNIL, and the USSR State Committee for Public Education. They include the Timiryazevskiy, Moscow, Leningrad, Ukrainian, Novosibirsk, Tselinograd, Kazakh, Estonian, and other

centers where manpower and resources are concentrated to solve the problems of biotechnology. But they are in need of improved physical facilities and equipment. VASKhNIL has been taking the necessary steps in that direction. Unfortunately, the USSR Academy of Sciences, the USSR State Committee for Public Education, and councils of ministers of union republics have not been showing the concern they should for financing and building the physical facilities of institutes and universities which are incorporated in those centers. This applies above all to the Novosibirsk, Leningrad, and Kazakhstan biocenters.

A project was designed in the Timiryazevskiy Biocenter and is now being carried out to create a transgenic potato with combined resistance to the Colorado potato beetle as well as viral, bacterial, and fungal diseases. Projects are under way in the Ukrainian Biocenter to create the initial material of grain crops and potatoes and to improve the methods of biotechnology, in the Tselinograd center there are projects to treat plants against viruses and to create a new form of spring wheat resistant to drought and salinity. Today, institutes of the potato industry of the RSFSR, Belorussia, and the Ukraine, joined by scientific institutions of Estonia, have organized the production of virus-free potatoes in a volume of 110,000 tons per year, which is 8 percent of the country's total need for it. The use of seed potatoes that have been freed of the virus guaranteed a minimum increase of 15-20 percent in the yield.

But, unfortunately, agricultural authorities and the managers and specialists of many farms are not sticking to the technologies for raising potatoes recommended by science, and as a consequence the effectiveness of virus-free raising of the seed potatoes is greatly reduced. This attitude toward the use of new scientific developments will be all the more intolerable when new virus-resistant varieties of potatoes and other crops come to replace the old ones in the next few years. In practically all republics and oblasts, it is possible over the next 2 or 3 years to create agrofirms for raising virus-free seed potatoes and making the complete transition to planting only these potatoes.

In the Ukraine, for example, the scientific-production system "Bioklon" is already in operation (head enterprise—UkrNIKKh). Its task is to test and debug the 3-year scheme for production of the elite potato on the basis of the technology of microcloning the virus-free material. Biotechnology shops have been created in 24 agricultural enterprises (kolkhozes, sovkhozes, agrofirms, and agricultural institutes), and they are part of the scientific-production system "Bioklon."

The achievements of the All-Union Selection Genetics Institute and of the All-Union Institute of Cropping imeni N.I. Vavilov in the study of protein markers have made it possible to introduce fundamentally new methods of evaluating the seed of agricultural crops and to determine its origin. They are widely used by the international organization ISTA even in the USSR.

The methods of biotechnology are today producing new ecologically clean preparations for cropping. Among those with the greatest economic importance are regulators of plant growth and development and biopesticides. Natural regulators after the pattern of the auxins, cytoquinines (tsitokininy), gibberellins, abscissic acid, fuzikoktsin, as well as new synthetic preparations which are analogous in nature are making it possible to increase the resistance of crops and plantings of agricultural crops to drought and other stress factors of the environment, to regulate growth, ripening periods, and the bearing of plants, and to improve the quality of the product. Favorable results have been obtained from the use of kartolin and certain other preparations on plantings of grain crops on farms of Belorussia and a number of oblasts in RSFSR. But the scale of application of such preparations and also biopreparations of nitrogen-fixing microorganisms in agriculture is still negligible.

Unfortunately, projects to create new microbiological preparations to protect crops from pests and diseases are lagging far behind. Only four domestic preparations are being used in production today, and even then on an extremely limited scale. Very great attention is being paid to this problem abroad. The reason is the large economic benefit from applying biopesticides, the possibility of sharply reducing the volume of application of chemicals for plant pest and disease control. The USSR Academy of Sciences and the USSR Ministry of Medical Industry possess the necessary scientific potential to quickly overcome the lag in developing research and creating a broad spectrum of biopesticides for agriculture. The efforts of institutes of VASKhNIL are also aimed in that direction.

In animal husbandry, contemporary biotechnological methods have made it possible to advance the work of transplanting embryos and zygotes to obtain highly productive animals, to create transgenic individuals with increased resistance to dangerous diseases, to obtain and use growth hormones to increase the productivity of livestock.

In scientific institutions and breeding farms, there are 34 specialized centers and 126 stations for transplantation of embryos, and more than 5 million calves have been obtained using this method. Paramount importance is being paid to this important effort. Genetic engineering methods have derived strains of microorganisms producing certain irreplaceable amino acids. Basic scientific projects are being carried out to create strains of microorganisms producing animal growth hormones whose use in animal husbandry, other things being equal, will increase the daily weight gain of livestock and the milk production of dairy cows by 10-15 percent. Other projects of economic importance are those to create strains of microorganisms that intensify processes in the digestive tract of animals in order to improve feed utilization. New microbiological preparations are being created for the preservation of animal feed, for improvement of its preservation during storage. All of these

projects are being conducted in close contact with scientists of VASKhNIL by researchers of the USSR Academy of Sciences and the USSR Ministry of Medical Industry. The principal projects in biotechnology in animal husbandry have been organized in the All-Union Scientific Research Institute for Animal Husbandry, the All-Union Scientific Research Institute for Animal Breeding and Genetics, by the All-Union Scientific Research Institute for Agricultural Biotechnology. But they have to greatly broaden the scale and the application of their developments in production.

It is of particular interest to practice to create transgenic animals, i.e., individuals with allogenic genes ensuring an increase in their productivity and resistance to diseases. Genetic engineering methods have been developed that make it possible to perform gene operations on zygotes of swine, sheep, rabbits, and other animals, and transgenic animals have been obtained with useful characteristics. A method has also been developed and applied for surgical division of embryo making it possible to multiply the number of progeny from particularly valuable animals. There have been essential advances of biotechnology in veterinary science. The production of immunoenzymatic diagnostics of infectious animal diseases using the methods of cellular and genetic engineering has made it possible to solve successfully the very complicated important problem of diagnosis, treatment, and prevention of foot-and-mouth disease and rhinotracheitis and to find new approaches to developing methods of diagnosing leukoses and other dangerous diseases.

The immunoenzymatic diagnosis that is in use is one of the most promising methods of discovering viral, bacterial, protozoan, and other infections of agricultural animals. Such diagnostics have been created today for many diseases as well as for detection of toxins, hormones, immunoglobulins of various classes, etc. Monoclonal antibodies have been obtained to stomatoviral enteritis of calves, gastroenteritis of swine, to the virus of cattle leukosis, and research is under way to develop immunoenzymatic analysis for diagnosis of cattle brucellosis. Systems for microbiological synthesis of diagnostic and preventive preparations against many diseases of agricultural animals are being created by the methods of genetic engineering in the All-Union Institute of Experimental Veterinary Medicine (Moscow). The achievements of biotechnology in the field of veterinary science are the most significant today. But even today what has been achieved should not be overestimated. Essentially, the work has just begun.

In the processing and food industries, biotechnology is being used today to produce enzymes, amino acids, feed and food proteins, therapeutic, preventive, and dietetic foodstuffs, various antibiotics, and feed additives (pre-mixes). Membrane technologies are also being used for ultrafiltration and fine purification as well as to create new types of foodstuffs. The need for them is increasing sharply. Biogas, obtained by processing organic waste using biogas installations, is a relatively inexpensive

source of energy in agriculture. These installations have been built and are in operation in Estonia, a number of oblasts of RSFSR, and in other republics.

Our country's institutes are not lagging behind the best foreign scientific institutes in the level of research and the quality of developments in the field of cellular and tissue biotechnology. But in terms of the scale of their application in agroindustrial production and other sectors of the economy we are lagging considerably behind the advanced capitalist countries, large and small. The efforts of scientists of the USSR Academy of Sciences and VASKhNIL are now being united to work along the priority lines of genetics and biotechnology, and toward application of their advances to production. Leading scientists of the USSR Academy of Sciences—G.P. Georgiyev and K.G. Skryabin of the Molecular Biology Institute, R.G. Butenko of the Plant Physiology Institute, I.G. Atabekov (Moscow State University), E.S. Piruzyan of the Molecular Genetics Institute, Yu.Yu. Gleba (Botany Institute of the USSR Academy of Sciences), and N.G. Debabov of the Institute for the Genetics of Industrial Microorganisms of USSR Minmedbioprom—are carrying on very important development projects in cellular and genetic engineering in close interaction with VASKhNIL scientists. Joint research with scientists of the socialist countries has also been organized under the Comprehensive Program for Scientific-Technical Progress of the CEMA Member Countries up to the Year 2000, whereby manpower is concentrated on priority target projects that have been worked out jointly.

Given the growing importance of the new directions in biology, one of the leading institutes of VASKhNIL—the All-Union Scientific Research Institute for Agricultural Biotechnology—has been given responsibility to function as the head organization on this problem. Jointly with scientists of Hungary, GDR, Bulgaria, Cuba, Mongolia, Poland, Vietnam, Romania, and Czechoslovakia three priority target projects concerning biotechnology in agroindustrial production are being carried out: "Virus-Free Cropping," "Bionitrogen," and "Foot-and-Mouth Disease." In the Soviet-Czechoslovak-Polish and Soviet-Bulgarian joint biotechnological laboratories, methods are being refined for transplantation of animal embryos, and research is being done on application of the methods of genetic engineering in animal husbandry.

According to the forecasts of leading scientists, by the year 2000 biotechnological products will have a share of 20-25 percent of the total volume of world trade of the APK and medicine. In the world's best laboratories, forms of agricultural plants resistant to the effect of herbicides, pests, diseases, and soil salinity have already been created. The seed of commercial varieties with these characteristics will soon go on the world market. The production and sale of physiologically active substances for animal husbandry are growing. Taking all this into account, a majority of the countries of the world have drafted and are carrying out national programs and projects to use biotechnology in medicine, agriculture, and the processing industry, allocating very large

resources for this purpose. Biotechnological centers and laboratories are carrying on research at a leading pace in the United States, Japan, West Germany, Great Britain, Canada, Australia, the Netherlands, Italy, and France, and China, India, and other developing countries are becoming actively involved in solving national biotechnological problems.

The strengthening of scientific-technical ties with all the leading countries in the field of biotechnology will be a pledge to its development. But it is equally important for the public and the state to support science along that road.

## FORESTRY, TIMBER

### State Committee on Forestry Meeting Discusses Future Tasks

*18240123 Moscow LESNAYA PROMYSHLENNOST in Russian 21 Jan 89 pp 1-2*

[Article by I. Gurova, A. Slavin, S. Meleshko: "To Increase Forest Riches of Our Country"]

[Text] What will be the situation in our forests in the 21st century? The Concept of development of Soviet forestry up to the year 2005 answers this question. The project was discussed at a conference of the USSR State Committee on Forests.

A. S. Isayev, USSR Goskomles chairman, addressed the conference.

"The Concept of development of forestry up to the year 2005," he said, "has set the task to increase forestry riches of the country, to use them with maximum benefit in the name of present and future generations of the Soviet peoples."

Forestry as a sphere of national production is important in many areas. The ecological role of the forests increases each year. At the same time, we have the world's highest volume of timber procurement, almost 400 million cubic meters per annum. However, the end production yield is very low. If the developing structure of lumber consumption is preserved, the excessive felling of calculated areas to be felled, which inflicts economic and social harm to society, will not stop and the predominant multi-waste technology, which damages the ecological system, will remain.

The technical equipping of forestry lags behind that of other sectors. The level of mechanization of labor stands at only 30 percent. Satisfaction of the social needs of forestry workers is 3-7 times lower than that for the country as a whole, according to many indicators.

The solution of major problems of rational, effective conducting of forestry and forest utilization is directly associated with an increase of the role of forestry measures and the scientific and technical, economic and ecological validity of projects.

The project of the Concept provides measures for improving the quality of inventorying forests on the basis of improvement of technology, wide use of measurement methods of forest price assessment, effective use of materials obtained by aerial photography, space photography, mathematical methods and electronic-computer technology.

Special attention is being given to determination of scientifically sound calculated areas to be felled as an important standard in forestry, which ensures continuous and non-depleting forest utilization. Forest organization should include studies on allocation and valuation of cuttings of major use, their material and money assessment for a 10-year period.

Cadastral assessment of the forest lands and creation, on this basis, of data banks for forest lands and areas for felling, maintenance felling, forest restoration and other forestry measures, carried out in the process of forestry measures, is very important.

The development and realization of the State program "Les", the pivot of which is forest restoration, became the new organizational principle of practical work of forestry agencies. It is directed at creation of a forest-growing industry equal to any in the world and guaranteeing high quality operations from seed production to the introduction of valuable young trees and organization of a system of profit and loss accounting of forestry nurseries. There are plans to create a special service for monitoring the quality of forest restoration and State acceptance of young forests.

In order to satisfy the ever growing needs of the country for wood from coniferous breeds, it is necessary to create plantations with a shortened cycle of forest growing.

Protective afforestation is becoming an important trend. We must have 18 million hectares of protective plantings.

The planned increase of procurement and processing of food products from the forest of 2-2.5-fold, said the speaker and this requires acceleration of technical reequipping of operating shops and increase of construction of new shops, improvement of providing forestry management enterprises with the cross-country transportation equipment and mechanisms for harvesting wild fruits.

An urgent task of the sector is provision of the agroindustrial complex with wood products and commodities in popular demand. More than 2500 enterprises supply wooden frames of houses, joinery, transport, distillate and other articles and garden houses. Volumes of these deliveries must increase henceforth.

The contribution of forestry to realization of the Food Program may be increased by rationalization of hunting facilities. The commodity yield from hunting is only 70 rubles per 1000 hectares of land, for the country as a whole. This is tens or hundreds of times less than that in

most countries of Europe. There are plans to concentrate control of the hunting economy in the USSR Goskomles system and to arrange long-term leasing of hunting lands to State, public and cooperative organizations to increase the responsibility of hunters for maintaining hunting areas and rational use of the hunting facilities.

Noting the state of affairs with regard to prevention and control of forest fires, A. S. Isayev reported that from 10,000 to 30,000 fires on an area of up to 1.5 million hectares are registered annually. Therefore, there is sensed an acute need for strengthening the state of technical equipment of the sector with devices for active fire extinguishment and creation of a centralized system of operational control of forest lands protection.

There is being constructed, on the whole, a system of governmental and specialized control of the state, use, reproduction, defense and protection of the forests.

Then the speaker discussed problems of personnel training. Purposeful training of specialists is being organized, in conformity with the Concept. A new type of intersectorial training, scientific-educational-industrial complexes, is being organized.

The speech placed special emphasis on development of the social sphere, primarily on the solution of the housing problem. There are 6.6 million square meters of housing space available in the sector (less than 7 square meters per worker). The level of engineering facilities of housing in the sector is extremely low. Only 13 percent of the flats have tap water, 9 percent have plumbing and 12 percent have central heating. This is 7-8 times lower than that for the country on the average. In order to solve the housing problem, we must build, by the year 2000, 1.3 times more houses than we now have.

Pausing on problems of the economic organization of forestry, the speaker noted that it does not meet present-day requirements. The basic cause of this is the absence of a direct dependence between the results of forestry management activity and the economic state of enterprises. The Concept proposes another way - charge for forest resources, development of leasing relationships, introduction of economic norms and quotas in the regulation of all forms of forest utilization. The expenditure approach, based on intermediate operational financing of operations, is being changed to payment for finished items according to prices which are differentiated according to quality. They should provide a profit which ensures creation of economic incentive funds.

The introduction into practice of a new economic mechanism will make it possible to interest labor collectives in efficient performance of forestry, rational use, saving and increasing the forest reserves of the country. Labor productivity in forestry in industrial production is being increased more than 1.3 times. The overall volume of production of forestry products is increasing by 30-35 percent and paid services to the public is increasing 3.3 times.

Then began discussion of the Concept project and the positions expressed in the speech. All speakers, basically, approved of the design of the document. At the same time, they offered some sound suggestions, corrections and amendments in addition to those already presented in the course of open discussions on the pages of our newspaper.

We shall present some of the opinions expressed.

**N. M. Prilepo, Minister of Forestry RSFSR**, discussed problems of financing forestry activity.

Forestry financing should be carried out by governmental financial agencies from the State budget. The method proposed, in the Concept project, for procuring funds for carrying out forestry management by complex enterprises, may, in our opinion, mean that little funds will remain for forestry operations.

Allocation of operational capital should be made for projects for laying down forest crops, constructing roads, carrying out forest protection measures, maintenance fellings etc..

We assume that mobilization of one's own capital from maintenance fellings should be transferred to the Minfin agencies as forestry income.

There must be an insurance fund and an incentive fund. This fund should be created by a special account of a state forestry establishment or forestry section not only at the expense of receipts from fines, penalties and different sanctions but also from security sums, paid in by each timber cutter for clearing and reforestation of felled areas. The deposit should be made after writing out the timber-cutting ticket to the insurance and incentive account of the state forestry establishment or the forestry section. After complete clearing and good natural restoration of felled areas - preservation of the necessary amount of viable regrowth - the security sums will be returned to the timber cutter.

Capital of the insurance fund and incentive fund should be spent on bonus awards to foresters, forest protection forestry sections and state forestry establishments for protection of the forests, their restoration and rational forest utilization and also on social and cultural development of forest sections.

We completely support the section of the Concept which speaks of the role of the forestry organization project as a legal, technical and planning document. We must improve the quality of forestry organization and achieve prompt fulfillment of all volumes of operations in forestry, projected by forestry organization for the 10-year revision period, including fellings for main use, maintenance fellings, forest restoration measures and forest fire control measures.

It is advisable to leave the performance of all forestry management operations in the USSR Goskomles plan, including that on the State Forest Lands, leased to the USSR Minlesprom. In addition to this, considering the bitter experience of past years, we must categorically

forbid complex enterprises of the USSR Minlesprom to change the boundaries of the forestry sections and state forestry stations without agreement of forestry agencies.

We must also establish that, for any intentional excessive felling, even if authorized, a payment five times greater than the fixed price must be paid into the State budget.

**V. I. Samoplavskiy, Ministry of Forestry, UkrSSR**

The project gives inadequate consideration to peculiarities of regional conditions, difference in forest resources and in ecological and economical specifics of different territories. This must be changed. It would be worthwhile to formulate clearly the definition of the overall nature of forest utilization with consideration, first of all, of the nature-protection functions and other uses of the forest. It is advisable to determine a reasonable limit of complexity of enterprises. The section on forest restoration is not studied adequately. We must expand and precisely define problems of protective afforestation and, possibly, even place this form of activity in an independent section as one of the most important sections.

Further. It is not enough to talk about improvement of forest fire protection and extinguishment; we must delineate means of achieving the goals. We must also develop some kind of principles so that enterprises are interested in development of foreign trade connections. The presently existing meager deductions in foreign exchange funds do not stimulate any initiative. The concept must be made shorter and more expressive. Some excessive details should be removed.

**V. P. Romanovskiy, Deputy Minister of Forestry, BelSSR**

We must carefully think through the legal basis of the Concept. We need guarantees that the problems raised in it will be solved.

We must also determine more smoothly the direction and scales at which industrial activity should be developed at our enterprises in order that we do not finally get away from forestry. At present, industrial activity occupies 60 percent of the volumes of our labor expenditure. Specialists, especially managers, spend 90-95 percent of their work time on these problems.

A rather weak aspect of the program is the social and economic development of the sector.

We must study the personnel problem. Training of specialists is very important. However, we must plan carefully for those who are now working for us so that we do not lose them. We need a carefully thought out system of concessions, especially to the timber industry workers, including fewer constraints and limitations. We must attract people to the sector and keep them in spite of the fact that the work here is very heavy.

**A. M. Zaytsev, Minister of Forestry, KazSSR**

All positions of the Concept must conform strictly to the Law concerning State enterprises so that the principles contained in it did not leave possibilities to impose in any new "wrapping" some wish of the enterprises.

It is scarcely worthwhile to link the increase of the standard of living of the people in specific salary figures. We already know from experience that, after introduction of new pay rates, in our republic, in particular, only 3050 of 3800 workers remained. Only one or two more such reductions by such methods will leave nobody to protect the forest.

An especially important problem is the extent to which realization of the social part of the project will succeed. Probably it is a good idea to study it in more detail, to outline specific measures for shorter periods of time and not only up to the year 2005.

**L. P. Vitols, Director General of the "Latviyesmezh" Association.**

A propensity to extreme centralization, as in control of hunting activities, for example, is examined in the Project. We must permit regions themselves to determine specific principles of management.

Very little is said about mechanization. You know this is the problem of problems, especially as concerns the creation of a base tractor for all forms of forestry operations.

**V. V. Lukashevichyus, Minister of Forestry, LiSSR**

It is important to adopt the position that nature parks remained under the authority of the forestry service. They should have one boss.

We must carefully think out means of stimulating the work of timber industry workers and the allotment of these personnel to the sector.

**T. S. Musuraliyev, Director General of the Forestry Association, KirSSR**

We must develop, in more detail, the program of improving the standard of living of forestry workers with consideration of regional and national features.

**Ye. I. Zelenko, main forester, Krasnodarsk LKhPO.**

In the Concept, practically all proposals are based on the fact that the State should allocate more funds to the development of the sector. But why would you not receive money at the expense of redistribution of profit between sectors of the forestry complex? Let us say, furniture makers, who make large profits and who are interested in wood, could make a standard allotment of money for forest restoration.

As concerns forestry organization, it is scarcely realistic and rational to withdraw a forestry area to be felled for main and intermediate use for 10 years into the future.

Obviously, however, it should be limited by basic, fundamental recommendations. On the other hand, we must include road construction in forestry organizations projects.

In order to stimulate development of sectorial sciences, it is worthwhile, possibly, to direct part of the centralized funds for scientific research in regional administrations (associations) in order that they themselves may make contracts for elaborations needed by them.

**L. I. Rogovaya, Main Forester, Vitebsk Board of Forestry.**

Hitherto, we received a plan and 30 percent additional tasks. The law on State enterprises is not for all laws, by far, she said-why do we describe the task nearly up to a blade of grass, up to a small berry for subsidiary use? As if it is seen from above how many mushrooms we will have this year. We must give enterprises more independence.

We must, somehow, reexamine problems of financing and capital allocation. Let us say, for the 20 years of my work in forestry administration, we did not once have 1000 rubles for labor incentive and, you see, there never were parasites. We must somehow interest enterprises in qualitative, initiative work. Possibly, it is worth while to provide a base sum of capital for forestry and the right to solve problems of the most significant trends of them.

We must excommunicate foresters from timber industry operations and, of course, refrain from the vicious practice, when, during accounts, they ask about cubic meters and sawn timber but nobody disturbs forest crops and nurseries. It is time to strive for the priority of forestry activity and to reexamine the work of forestry specialists. It is time to be concerned about the human factor. Hitherto, we have had the lowest rate of all sectors. Is it possible our work is the lightest?

**M. I. Busygin, Minister of Forestry, USSR** emphasized, in his speech, the necessity for closer coordination, combination of ecological and national economic interests of the timber industry and forestry. In view of this, we must, first of all, guarantee the most rapid growth of deep processing of wood and maximal use of all of its wastes.

Gosplan and Gosnab USSR should change the structure of timber consumption. In Japan, for example, there is not one wooden post nor one wooden tie. We use the best timber for this.

And timber supply? Timber from Archangel and Vologod oblasts is shipped into Moscow and firewood from Kirov Oblast is shipped into Bryansk. Meanwhile, you know, in Moscow Oblast are many forests which have stood too long; it is cluttered up and poorly maintained and used.

The minister emphasized that our sectors need a maneuverable wheeled tractor and not a heavy caterpillar tractor which damages the soil and kills the undergrowth.

**V. G. Nikanova, Politburo Member, secretary of the CPSU Central Committee** offered a few words.

The decree adopted by the committee provides for monthly elaboration of the Concept project with consideration of the suggestions, remarks and additions expressed.

Forestry agencies of the union republics are charged with accelerating improvement of the republican Concepts

and with guaranteeing their balance with Concepts of associated sectors of the national economy.

Scientific research institutes of Goskomles USSR provide the primary performance of studies on problems designated in the Concept up to the year 2005.

An All-Union Congress of Foresters is Planned for 1990.

## POLICY, ORGANIZATION

### Importance of Construction Price Restructuring Stressed

18210023 Moscow EKONOMICHESKIYE NAUKI in Russian No 7, Jul 89 pp 41-45

[Article by Candidate of Economic Sciences Anatoliy Nikolayevich Yezhov, department chief of the Central NII [Scientific-Research Institute] of Construction Management and Economics of USSR Gosstroy [State Committee for Construction Affairs]: "Restructuring Price Formation in Construction"]

[Text] The conversion to full economic accountability [*khozraschet*] and self-financing in construction—a capital-creating sector of the national economy, as well as other sectors of it—assumes the restructuring of price formation as a paramount task. The latter in this sector is reduced to setting estimated standards and determining the estimated cost, which is also used as the price without differentiation from cost. The function of prices is thus intrinsically reduced to naught as a result. The fundamental difference between the processes of creating the cost and forming the price, however, remains undisputed.<sup>1</sup>

The estimated cost (or price) of the output of construction takes shape from separate elements in the process of setting estimated standards, while the social cost and the price, being formed objectively, break down into separate elements. A delimitation of expenditures of past and current labor is not done in the estimated cost, estimated standards or the estimate documentation. This makes a determination of the surplus product created in construction and the standard profit in the price of its output along with the performance of analytical work in the sector according to the indicators accepted in reproduction theory more difficult.

The unfounded reflection of expenditures on materials, rises in costs of operations during winter, funds used for temporary buildings and structures or for planned accumulations, as well as in the form of so-called "other" spending, in the applied-spending calculations is a serious drawback in the prevailing mechanism of price formation in construction. Repeat counting occurs, all the more marked as the cost of materials and the proportionate share of costs for materials comprise 75 percent of direct spending.

The cost form of construction output is divorced from its material-item content, since it reflects a "false cost." Unjustified growth in estimated costs leads to annual rises of 7-10 percent in construction cost and distortions in indicators of economic efficiency. The unfavorable effects of these negative process are increasing with the conversion to self-financing.

There are more than 100,000 estimated standards and a set of millions of valuations in construction. This whole effectively uncontrolled system is reviewed an average of

once every 15 years and, being associated with very great expenditures of labor, is known to have no impact. The last review of the estimated standards was done in 1984. It reflects the conditions of economic operation at the beginning of this decade, but those standards are to remain in effect until the end of the 1990s. What efficiency can we speak of here?

The new conditions of economic operation assume the utilization of new economic approaches. A conversion to contract prices has been underway in the sector since 1987 in accordance with the CPSU Central Committee and USSR Council of Ministers decree titled "Steps to Improve the Mechanism of Economic Operation in Construction." The first attempts to employ them had contradictory results, which sowed some doubts in the correctness of this approach. The lack of economic substantiation for the category of "contract price" and its standards base—price scales per consumer unit of construction output—is a real foundation for these doubts. The estimated cost calculated according to "cost-is-no-object" methodology is used in practice as the basis of contract prices. The consumer value of construction output does not attract the proper attention. The untimely nature of the presentation of planning-estimate documentation to the construction organizations also has an effect, as do the incompleteness of a regard for the interests of all participants in the investment process and the willful distortion of contract prices in the state orders. The share of state orders in the sector exceeds 90 percent in relation to estimated cost.

Both the resolution of general issues in setting prices in a socialist society and special developments in sector science should help in overcoming the flaws in price formation in construction. The basic positions in this realm leave much to be desired. It is enough to say that the problem of socially necessary expenditures of labor in the sector have not been researched. It was decided *a priori* to consider an average level of expenditures as socially necessary. Attention was not paid therein to the individual nature of construction output or to the fact that such an income-forming factor as land is used in it. It is understandable that a multitude of other issues that are secondary to the those cited but paramount in their role in the emergence of a new mechanism of economic operation in construction were not resolved either. One also cannot fail to point out the extremely unsatisfactory state of the statistical base that specialists in the realm of construction economics have at their disposal: the data for comprehensive analysis, first of all, are not comparable; second, they contain no complete representation of price formation; and, third, they suffer from very marked distortions.

The conversion of construction to self-financing makes necessary a restructuring of the system of price formation in the sector using principles that are opposed to cost-is-no-object ones. The magnitude of the expenditures, both social and individual, of course, cannot be ignored. The discussion concerns rather the paramount orientation of prices toward consumer value; a real

reflection of cost and labor expenditures at the actual social level; and, a regard for competitive market conditions with justified deviations of price from cost. Prices formulated in this manner should react in clear-cut fashion to the dynamics of the factors that condition them and rule out double counting while providing incentives for reductions in expenditures of social labor. We note that it is necessary to create anew a unified system of price formation in construction that does not depend on the departmental or parochial interests of construction organizations. The practical resolution of these tasks requires a democratization of the process of price formation and the widespread incorporation of contract prices based on a combination of the interests of the client, planners, contractors and users of construction output.

It cannot fail to be taken into account that price formation in construction plays the role of the "genetic source," as it were, for the formation of expenditures in all sectors: the estimated cost of enterprises, buildings and structures is represented in the cost of practically all products. It is important to consider the little-researched problem of the "proper cost" in this connection. This is not the "false monetary cost" leading to the redistribution of monetary resources that was written about by K. Marx. The modern "false cost" has a different nature and mechanism of formation. It is that portion of the social cost that is not the result of labor and is not covered by goods. Its foundation is the cost-is-no-object methodology of price formation and repeat counting. The presence of such a "false cost" inevitably undermines value proportions and the realization of state plans and gives rise to the unsubstantiated issuance of paper money and inflationary processes.

The mechanism for the appearance of the "proper cost" can be presented in the following form using the example of the economics of construction.

The estimated cost of construction is formed on the basis of direct expenditures and relative standards. **Direct costs** include the basic wages of the workers and spending on the use of construction machinery, the acquisition of construction materials and their delivery to the intended site. The **relative standards** are the applied expenditures, planned accumulations, expenditures for temporary buildings and structures, the increased costs of work in winter and other expenditures. Such standards are defined in percentages of the direct expenditures, logically raising the total.

Suppose that direct expenditures total 1 million rubles with a proportionate share of the cost of construction materials of 75 percent (a realistic figure). Then the estimated cost of the construction and installation operations using average standards and with an incomplete list of other expenditures will total 1 million 367 thousand rubles. Also assume that the planners, as often happens, substituted construction materials (the needed ones were unavailable) that were 10 percent more expensive. Then the direct expenditures, and after them the

entire estimated cost (price), should rise by 75,000 rubles. In accordance with prevailing methodology, however, the estimated cost increases by 103,000 rubles rather than 75,000. The extra 28,000 rubles are "false cost"!

There is in practice a persistent trend toward a rise in prices for materials. The estimated cost of construction materials has grown by an average of 25 percent since 1969. This has led to the appearance of "false costs" of more than 450 billion rubles for new construction alone, which are distributed to the output of all sectors of the national economy and causing a natural rise in their cost. A "false cost" also arises in the sector in the event that prices for construction machinery and equipment are raised without cause, outstripping the rise in their technical features, or when depreciation continues to be deducted for equipment that is being operated beyond its engineering service life (which restrains scientific and technical progress in the sector). "False costs" also arise as the result of rapid rises in wages compared to growth in the labor productivity of current labor or from the padding of figures.

The trait of inflationary expansion of the whole system of money-exchange relations is characteristic of the "false cost" virus: it distorts the determination of the magnitude of costs, price formation, monetary circulation and credit in an unhealthy fashion and loosens incentives for labor and the whole mechanism of economic operation. An understanding of the essence of "false cost" and the mechanism for its appearance makes it possible to look in a different fashion and quite critically at the prospects for a radical reform of price formation. It seems that matters are inclined toward failure and the substitution of an imitation reform for a real one with the preservation of the multi-billion "false costs."

Calculations show that the cost-is-no-object methodology in construction price formation has reproduced an aggregate "false cost" of about one trillion rubles over the course of the postwar period alone. We must get rid of this cumulative "false cost" on the path of the radical reform of price formation that we are in need of via a recalculation of the magnitude of the cost of the fixed capital corresponding to reductions in product cost and wholesale and retail prices along with the actual eradication of the cost-is-no-object approach. We will be unable to establish real cost proportions, reinforce the ruble, eliminate subsidies or avoid raising retail prices without resolving this problem.

Practice unfortunately is not encouraging in the attempts to get rid of "false cost." USSR Gosstroy has decided to exclude the cost of materials from the basis for determining planned accumulations alone, leaving all the remaining relative standards without changes. The norm for planned accumulations is increasing roughly from 8 percent to 22 percent therein. "False cost" not only does not disappear, and on the contrary even increases in this situation.

The new mechanism of price formation should be oriented toward the end product: "turnkey" construction and the construction of complexes, enterprises, buildings and structures without outfitting them with equipment, furnitures or fixtures. The latter form will be more widespread in the foreseeable future in accordance with the level of development of productive forces that has been reached in the sector. The **contract price** for complexes, enterprises, buildings and structures should thus be the central link in a new mechanism of price formation in construction. It will be determined by the customer and the general contractor with the participation of the planners (and, possibly, the future users of the product) at a stage preceding the development of working documentation and legally recorded in a contract agreement. The contract price will consist of a so-called **fixed portion** (in the form of the estimated price) and a **variable portion** reflecting elements of uncertainty that also require the consent of the parties in concluding the contract.

Both parts of the contract price as limits will be confirmed before the creation of the working documentation. The fixed portion in the form of the estimated price will be defined as the aggregate estimated spending on the impending construction and a standard profit calculated without regard for the materials-intensiveness of the construction output. Price scales per consumer unit of construction output and other amalgamated standards will basically comprise the standards base for the contract price in the future. It does not seem possible to reject entirely the system of estimated standards setting in the next few years in determining the contract price. But in my opinion, the **methodology for calculating the relative standards should be altered.**

The effects of the materials-intensiveness of the output on the magnitude of the price should be eliminated first and foremost, guided by the CPSU Central Committee and USSR Council of Ministers 17 July 1987 decree titled "Guidelines for Restructuring the System of Price Formation Under the New Mechanism of Economic Operation." Profits in construction under the prevailing methodology depend more on the generosity of the planners than on the good work of the sector. It is possible to increase the profits of the construction workers by billions of rubles before they have even begun to do anything by replacing cheaper materials with more expensive ones. The more expensive the materials employed in construction, the higher the applied costs, the more expensive the work in winter, the expenditures on temporary buildings and structures, procurement and storage costs or other expenditures, the higher the whole estimated cost. Here the internal vicious circle of price formation is operating successfully: raise wholesale prices for construction materials and all of the enumerated components of the estimated cost of construction and installation operations go up at construction sites across the country and the cost of construction increases, bringing about a rise in prices, including wholesale ones for construction materials.

There is one way out: **eliminate from the basis of calculations the aforementioned relative standards for materials**

**cost.** Their valuation according to estimated prices skews economic relations. In some cases it makes it unprofitable to employ the materials that are most widespread in construction and are near the construction sites, and in others it makes it possible to receive unfounded profits. A review of the methodology of averaging transport layouts is also needed: major construction sites should have specific transport layouts; medium-sized sites can have several transport layouts (a transport atlas), since matters are more complicated with material and technical supply and the managers have to scramble more there. As for the transport expenditures, they should be separated from the estimated price and averaged individually for the transport layouts calculated in such a way as to ensure normal reproductive conditions for the main body of construction organizations.

The ESN also cannot remain unchanged. Current and past labor are intermingled in them, and depersonalized "average" construction machinery is taken into account for literally every insignificant type of work, although the use of construction equipment and a determination of the need for it make economic sense for construction overall. More than a third of construction machinery has currently exceeded its standard service life. Foreign-manufacture construction equipment (its proportionate share is growing) is not taken into account in the ESN at all. The ESN that will be introduced in 1991 will exist unchanged until 1996, assuming expenditures for equipment that actually do not exist under the conditions of the technical retooling of the sector. There is no need to prove that this is in clear contradiction to the demands of economic accountability and self-financing.

The ESN should reflect the actual construction equipment, progressive technical and economic features and expenditures typical of the main body of construction organizations. For this purpose, **expenditures for the utilization of construction machinery must be removed from the ESN and the unified regional unit valuations (YeRYeR)—the monetary expression of the ESN and the piece rates established using them.** This would resolve the existing contradiction between the planning-estimate prices according to which the construction workers lease the equipment and the payments by the customer of that equipment according to the estimates. There is no reason for the subcontractor to dodge here or to pad figures so as to cover his losses.

We should alter the forms of statistical reporting now in order to make the conversion to the new mechanism of price formation in the next five-year plan. The necessity of setting estimated standards gradually recedes to the extent of the development of price scales. The contract price will be the limit for the whole construction period and be defined exclusively on the basis of price scales and other amalgamated indicators.

The economically accountable activity of construction organizations within the framework of the contract agreement and the regulation of the mutual relations of the general contractor with the subcontractors should be founded on contract prices for types of work. These

prices should be determined at the concluding stage of the planning—in the working documentation—and contain an appropriate system of supplemental payments for improvements in the economic features of the types of work being performed. The contract of the subcontractor will envisage a system of sanctions against the violators of contract obligations.

Estimated prices for types of work will include estimated expenditures and standard profit. The significance of the "cost-is-no-object" system of estimated standards setting for price formation will decline herein as well. It will, along with amalgamated standards and partly with price scales, serve the producers of the work as a recommendation document for determining the estimated expenditures and estimated prices for types of work. The mechanism of the system of contract prices, taking into account the whole aggregate of price-forming factors, will finally make it possible to transform price in construction from a formal category into a lever for economic compulsion toward the realization of state investment policy combining the interests of society, the sector, the collective of workers and individual workers. A number of problems of a general nature will have to be solved along the way that are typical of economic relations at the level of the mechanism of economic operation of a sector. An orientation toward "turnkey" construction thus conditions the expediency of a gradual transition **from the cooperation of construction and industry toward their integration** and the possible creation of a "Stroyprom" [Construction-Industry Complex] in the future. Price formation for the end product of construction assumes a re-orientation of construction production from a basically technological specialization by types of work to specialization according to the construction of certain facilities. This will make possible the gradual dissolution of the monopoly position of the producers of construction output—the contractors—and the organization of their work on the basis of competition for the right to a contract.

It would be expedient to think about integrating construction and planning organizations and raising the role of the producers of the construction output in the process of price formation along with instituting a tax for incomplete production for the more successful development of positive processes in construction price formation.

#### Footnote

1. See: Marx K., Engels F. Works. 2nd Edition. Volume 26, p 540.

COPYRIGHT: Izdatelstvo "Vysshaya shkola", "Ekonomicheskiye nauki", 1989.

#### Gosstroy Ruling on Nonstandard Building Plans Viewed

18210024 Moscow *IZVESTIYA* in Russian  
25 Aug 89 Morning Edition p 1

[Article by A. Blokhin: "The End of Standardization's Dictate"]

[Text] USSR Gosstroy has approved a ruling eliminating the monopoly in design decisions. Design organizations and clients can now make individual designs (even if analogous standard ones exist) provided that they achieve optimum final economic results.

Small enterprises for processing meat products are built from light compact structural units with equipment already installed. The first such domestically built microplant appeared in Ramenskoye, near Moscow. Previously, we purchased all such enterprises (so-called modules) from abroad. Moreover, we were forbidden to build them ourselves as they were not standard designs.

Twenty-five or 30 years ago, when the country did not have enough qualified designers and, in fact, the foundations for a modern construction industry were being laid, the strict orientation towards standard designs had some positive value. To a considerable degree it assured quality in construction and a sharp acceleration in its pace. However, the negative sides of the design monopoly have long been known.

They are especially evident in industrial construction. In view of its technological characteristics, volumes and location, each production operation needs its optimal parameters—building height, column spacing, etc. Frequently, however, designs did not meet specific requirements, but were selected from the most suitable standard design.

P. Sobolev, head of USSR Gostroy's Main Design Administration, says, "The use of standard designs and directive methods has recently become a sharp brake upon technical progress in construction, has leveled out the creative potential of design engineers and architects and markedly hinders improvements in the construction industry. Real cost accounting is replacing the commonly known hitherto immutable procedure in which clients and designers were obligated first of all to coordinate their work with the builders."

Does this mean that all standard designs will now go to the archives? By no means.

Changing social conditions, the birth of genuine cost accounting, leasing, family and other forms of contracts have increased the demand for design work as never before. Farmers need a selection of cow barns (or, if it is more advantageous, barnyards) for 3 - 5 - 20 head and not "the world's largest" animal farm. Urban housing construction needs a selection of components which would finally rescue our cities from faceless drabness and architectural boredom, making it possible to attain variety from standardization.

Members of gardening cooperatives, and individual rural builders are in the position of the customer deciding what to buy in a store with empty shelves. Only yesterday, in one instance heating was categorically forbidden, and in another there were strict limitations on the number of square meters under a roof. A catalogue of standard designs was compiled from all these "no-no's"; now we need designs without such "no-no's."

In summing up the discussion, I. Petrov, department head at USSR Gosstroy, noted, "For decades the standard design 'doctrine' has been based upon the impossibility of rising above that which already exists in the production of construction materials and components. Now we are resurrecting the old concept of standard design: it should move forward and embody elements of progress. One other necessary condition is that it have an exclusively recommendatory nature."

## GOODS PRODUCTION, DISTRIBUTION

### Consumer Protection Group's Problems in Tyumen Discussed

*18270130 Moscow IZVESTIYA in Russian  
11 Jul 89 Morning Edition p 2*

[Report by correspondent Yu. Perepletkin including an interview with B. Grigoryev, head of a Tyumen consumer protection group: "Goods and the Consumer"]

[Text] Tyumen—On the television screen events were taking a turn reminiscent of a detective novel with a courtroom scene. And it was in essence a trial: it was the public's proceedings against the highly complicated system which allows producers of goods to dictate to the consumers, i.e., to all of us. Local television was transmitting a broadcast on the first practical actions taken by the Society for the Protection of Consumer Rights, officially registered in Tyumen.

The matter of discussion in the television broadcast was a furniture suite, one piece of which was clearly a mismatch in terms of design and quality. The injured party, a buyer, convincingly stated her claim, and the group's directorship assured her that justice would prevail and that they would bring the careless workers who were responsible to justice.

Will they bring them to justice? The newborn group is still largely feeling its way and using its intuition, apparently without firm conviction that it will succeed.

I spoke with B. Grigoryev, the head of the Tyumen Society for the Protection of Consumer Rights, about the organization's concerns, plans, and problems.

"First of all," began Boris Viktorovich, "I will identify the main goal which we have set for ourselves: to defend a rather broad range of socio-economic interests of northerners, from the practice of price formation to the output and sale of high quality and, it follows, safe production. For us the concept "production" includes not only essential commodities, such as public catering and everyday services, but also scientific and technical developments, housing construction, work in communications, medical services, and much more."

[Perepletkin] At the beginning of this year the USSR Soviet of Ministries issued a decree which called on consumer groups to create a barrier against price increases and the "laundering" of assorted inexpensive goods. Are there any regulative documents for you yet?

[Grigoryev] There are more than enough, but their language is at times confounding and full of contradictions. We are guided in our work by civil legislation. We are anxiously awaiting the adoption of the Law on the Quality of Production and the Protection of Consumer Rights, but it is still in the drafting stage.

[Perepletkin] In general your group is having a difficult time of it: there is no law, instructions are full of

contradictions, and then the local authorities are probably not very happy to have you around...

[Grigoryev] There are of course difficulties, but I must say that during the first and most difficult stage the oblssovprof [regional trade union council] staunchly supported us. And the Tyumen gorispolkom [city executive committee] registered us without any delay. Several organizations transferred to our account a starting payment, so to speak: money needed for making extradepartmental ecological and chemical appraisals, for work on lecture-based propaganda, and for other objectives. Literally since the first days we have been inundated with work: having heard about us, people call, write, come to file complaints, and send delegations.

Several buyers informed us that the store "Gifts of the Earth" was selling "adulterated" honey. Together with the representatives of gostorginspeksiya [State trade inspection] we conducted an inspection, and the complaint was verified. The sale of pseudo-honey was discontinued, the results of the inspection were sent to investigative bodies, and the store was fined upwards of 10 thousand rubles from its sales totals.

A group of war veterans sent us a bitter letter according to which it appears that in the Tyumen center of "Avtovaztekhobsluzhivanie" [technical services of the Volga Automotive Industrial Association] blatant extortion has become the rule and technological discipline has been violated in the crudest manner. It is a complex matter, and it was necessary to create a commission to thoroughly assess the situation. The struggle against "the kings of the auto-service industry" has not yet ended. Arming itself with the results of an inspection, the consumer society turned to the directorship of the Volga Automotive Plant and UVD [Directorate of Internal Affairs] of the Tyumen oblispolkom [oblast executive committee]. Things will be put in order; we will not allow this question to escape our purview.

[Perepletkin] All the same, don't you feel isolated? Sure, there are similar societies in Moscow, Leningrad, Zapozhe, and several other cities, but each has its own statutes and tries to go its own way.

[Grigoryev] One senses the isolation with every step. It is probably necessary to create a single all-government consumer's union. At such a high level a number of the most important issues can be resolved, among them that of financing. It would be frivolous to allow our work to depend upon fortuitous donations. I personally feel that our fund should be financed by the trade unions. I think it is also legitimate to discuss the creation of our own consumer magazine. As far as I know, an action committee is at work in the VTsSPS [All-Union Central Council of Trade Unions] preparing for the coming constituent congress. Will it take place?

\*\*\*

My discussion with B. Grigoryev was repeatedly interrupted by phone calls. One person came with a concrete

grievance, complaining about an injustice done to him. Others wanted to verify whether an organization had really appeared which could finally call to order those who shamelessly dictate their will to the buyer, the client, the patient, the visitor, and the customer.

Yes, a consumer group has appeared. But it can hardly change everything for the better at one stroke.

## HOUSING, PERSONAL SERVICES

### People's Control Committee Evaluates Housing Program

18270139 Moscow AGITATOR in Russian  
No 14 Jul 89 p 23

[Article: "What Hinders Providing a Separate Apartment to Every Family"]

[Text] At a regular session the USSR People's Control Committee there was an examination of how the question of providing a separate apartment to every Soviet family is being solved. It was noted that work results of construction organizations in 1988 are cause for serious concern about the implementation of the housing program. The amount of housing introduced declined by 2.6 million square meters compared to 1987, 1.5 million square meters of this shortfall was in the countryside. Two and a half billion rubles in state capital investments were not utilized and the population did not obtain about 80,000 new apartments. There has been practically no decline in the number of families needing improved housing conditions. Cities and other settlements have not been provided with comprehensive services and other improvements.

Everywhere there is lagging in the construction of facilities for preschool children, for health care, education, culture and trade. Almost 40 percent of housing and social-service facilities are introduced at the end of the year. This causes storming and low quality construction and especially finishing work. In many oblasts and republics there are still only weak efforts to use the population's resources for constructing individual and cooperative housing, especially in the countryside, small cities and settlements. Cooperative housing does not exceed 7 percent of total housing construction, while individual housing is 15 percent. There is listlessness and

lack of initiative in housing and social-service construction by labor collectives, kolkhozes, sovkhozes and cooperatives using their own resources.

It is very difficult for individual builders: For years they could not acquire the needed materials because they were not for sale. Local organs still continue the shameful practice of diverting market stocks of these materials to industrial and agricultural construction and of selling them, by written order, to organizations.

One reason for the unsatisfactory pace of housing construction is the incomplete use of house construction enterprise capacity: Many large panel house construction enterprises are only working at 65-70 percent of planned capacity and many brick plants are working at only 60 percent. This alone means that the public is shorted up to 100,000 apartments annually. There are practically no leasing arrangements in house building.

There is insufficient urgency and persistence in the development of the industries producing construction materials, and especially house components, linoleum, parquet, windows and doors, plumbing, bricks, slate, and other materials for local planning, construction and supply organizations.

Neither is "big industry" in a hurry to help new home dwellers and builders. Construction and reconstruction work are badly lagging at the Samarkand lift construction plant, the Santekhpribor [Plumbing] Plant in Kazan, the Tselinograd Ceramics Kombinat and at other enterprises.

Speeches at the People's Control Committee meeting and letters from city and rural dwellers were full of complaints and reproaches for low quality and incomplete construction, unwarranted defects in houses and violations of social justice in the allocation of apartments. According to reviews conducted by people's controllers in 1988, low quality and incomplete construction caused more than 300 buildings totalling more than 700,000 square meters to be excluded from reports.

Punishing the guilty, the USSR People's Control Committee demanded that central and local construction agencies and organizations bring order and improvements to the housing program.

COPYRIGHT: Izdatelstvo TsK KPSS "Pravda". "Agitator".

## ELECTRIC POWER GENERATION

### Training Course for IAEA Inspectors at Novovoronezh AES

18220987 Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 10 Sep 89 p 2

[Article by A. Pavlov: "Inspectors Behind the School Desk"]

[Text] For the 10th time future IAEA [International Atomic Energy Agency] inspectors are undergoing a course of training at the Novovoronezh Atomic Energy

Station. For 20 years the AES' collective has studied the issues of IAEA guarantees, strict monitoring of equipment, and complete open access to information. The experience they have acquired allows them to offer courses for the international agency's inspectors.

The course schedule includes study of the design of light-water reactors, information on the use of nuclear fuel, measurement of radioactive materials, and mastery of control methods. The future IAEA inspectors, representing eight countries, are being taught by leading members of the international agency from the USSR, Czechoslovakia, and the United States.

## Productivity, Wages in Co-op, State Sectors Compared

18280272 Moscow IZVESTIYA in Russian  
8 Aug 89 Morning Edition p 2

[Article by Candidates of Economic Sciences K. Kagalovskiy and L. Valdman: "Are Their Wages Legal?—Comparing the Work of Construction Workers in the Cooperative and State Sectors"]

[Excerpts] *Public opinion has been reacting in unhealthy fashion of late to some shady aspects of cooperation. A tendency has appeared of placing on cooperatives, without grounds and without investigation, responsibility for today's economic difficulties: they pile up money, they say, without giving anything in return. A comparative analysis of the activity of production cooperatives and state enterprises related to them by field seems of interest in this regard. We will consider the work of two construction organizations: the Stroitel Cooperative and the Karellestroy [Karelia Construction] State Construction Trust. [passage omitted]*

The cooperative has over six hundred people. They are basically men 30-40 years of age who have mastered two or three fields, drivers, bulldozer operators and mechanics. The work is done on the duty-shift method, on two shifts without days off. The shift is 12 hours long. There are two months off after four months of uninterrupted work. [passage omitted]

The necessary materials and fuels are usually supplied to the cooperative by its clients. They lease the machinery and equipment, paying an amount on the order of the depreciation deductions for complete replacement along with capital repairs. The leased equipment is quite worn out in the majority of cases and requires frequent repair, which is accomplished by the manpower of the cooperative. They are also trying to provide their own equipment. This is very difficult to do, however, in view of the acute shortages of it.

The cooperative pays an income tax to the budget of 4 percent of its economically accountable [*khozraschet*] income. Eight percent of total wages are deducted for state social security as determined according to standards that have been approved by the client (based on the volume of construction and installation work that has been completed). Deductions are made from the remaining sum for the indivisible fund (the cooperative development fund) of no less than 5 percent of income, as well as no less than 2 percent for the reserve fund and the fund for social and cultural functions, social security and housing construction. The remaining funds are distributed among the members of the cooperative in accordance with the number of calculated workday units.

Every worker receives the sum of 300 rubles a month in advance. A final accounting is done at the end of the quarter in which are calculated the number of workday units worked, overtime hours, the actual cost of a

workday unit in the given quarter, factors for raising (or lowering) the cost of a workday unit with a regard for the specific working conditions of the duty-shift method, as well as job factors (the factor is 2.0, for example, for the cooperative chairman, 1.7 for the chief engineer, 1.6 for sections chiefs etc.).

The Karellestroy Trust was not selected by us as the base for comparison by accident. It is the closest to the Stroitel Cooperative in the volume and structure of its work (about 40 percent in road construction) with all the methodological difficulties of such a juxtaposition.

Possessing half again as many workers and a developed production base, this trust performed barely half the work volume using its own manpower for the period we are researching (from January through October 1988). Output per worker was 5.722 rubles—barely a third of the cooperative. The monthly worktime budget in the trust was 174 hours versus 360 for the cooperative.

Construction equipment is used much less intensively by the trust. This is evident from a comparison of the shift coefficients, which totaled (as recomputed for an eight-hour work shift) 1.23 for the trust and 2.75 for the cooperative. Non-productive expenditures totaled 21,000 rubles for the trust and 2,700 for the cooperative. Marked differences are also observed in the quantity of administrative personnel, including executives, specialists and office workers. Their share of the overall number of construction and production personnel was 18.9 percent for the trust and 7.4 for the cooperative. If we use the indicator of number of workers in this category per million rubles of contract operations, it totals 33 people for the trust and just a little over four for the cooperative. The differences in the results of business operations are also conditioned by the differences in wages. The average monthly wage per worker among construction and installation personnel totaled 247 rubles for the trust and 933 for the cooperative.

And who puts more money into the state coffers? The total payments of the Stroitel Cooperative to the budget were 894,000 rubles (of which 672,000 were taxes on wages). Karellestroy is free of payments to the budget. It makes no payments for allocations or for labor resources, and generates no deductions from profits. The budget gets only taxes on the wages of the workers. The trust, aside from that, received a subsidy in the amount of 231,000 rubles for the higher-up Karellesprom organization. The cooperative receives no state funds and does not even make use of bank credit.

Stroitel provided 74 percent of the receipts from all cooperatives to the budget of the autonomous republic. The production capacity of the region's construction system has grown appreciably with its appearance.

What in principle limits growth in the volume of construction and installation work in the region? The volume of any production in a market economy, as is well known, is restricted by the effective demand of consumers. There are two principal limitations under

our conditions. The first is "internal" and connected with the fact that the business managers are far from striving to uncover their production reserves and adopt plans that materially surpass the levels reached before. This limitation is absent in the cooperative. The second is "external" and associated with the shortages of resources. First and foremost equipment, spare parts, fuels and lubricants. Only a conversion to wholesale trade in capital goods will create conditions for the normal development of cooperatives like Stroitel. [passage omitted]

The employment of the new tax schedules that were discussed recently at a session of the Supreme Soviet could, of course, markedly alter the indicators of personal income for workers in cooperatives, as well as the payments to the budget, but they will have no fundamental effect on the results of comparison itself. At the same time, since we are touching on the tax problem, we would note that it is very dangerous, in our opinion, to try to throw the "tax bridle" onto the cooperatives. This would hit namely the production cooperatives first and foremost. If taxes are raised so much that the wages drop materially below the social expectations of the workers, they will simply quit and the cooperatives will disintegrate, which will lead automatically to reductions in construction operations. The state, aside from everything else, will be deprived of some payments to the budget. The construction cooperatives will be able to survive with an excessive tax burden only by raising prices for their output and thereby shifting the expense of taxation onto the customer. A differentiated approach providing cooperatives of an entrepreneurial type with support from the state is thus essential herein.

#### **Weaknesses in Trade Union Draft Law Noted**

18280270 Moscow *TRUD* in Russian 5 Aug 89 p 2

[Article by Yu. Shcheglov, chairman of the Yaroslavl Oblast Trade-Union Council and VTsSPS [All-Union Central Council of Trade Unions] member, under the rubric "Discussing the USSR Draft Law 'The Rights of Trade Unions in the USSR': 'The Next Concession?'"]

[Text] A little over three months have passed since the publication of the draft law on the rights of trade unions in the USSR. The oblast council of trade unions and trade-union obkom committees are conducting a discussion of the draft law. A plenum of the trade-union obkom of employees of state institutions has been held, for example, and expanded sessions of the presidiums of city and rayon trade-union committees have been held and meetings have been held at 40 primary organizations of this trade union. The members of the elective trade-union organs, professionals and lawyers have taken part in them. Roughly the same thing could be said about the enterprises and organizations that are united in the Yaroslavl City Committee of the Trade Union of APK [Agro-Industrial Complex] Employees and other committees of sector trade unions.

There is seemingly nothing to worry about, but the feeling of alarm will not go away. First and foremost due to the small number of suggestions and remarks on the draft. And they are moreover coming principally not from the primary organizations, but rather from the employees of oblast and rayon trade-union committees and departments of the oblast council of trade unions.

The reason is, I suppose, that in the face of the general acknowledgment of the need to adopt the Law on Trade Unions, the draft law in the edition proposed has not moved people, has not interested them. The members of the trade union are saying directly that the law is not needed in its current form: it does not increase the protective functions of the trade union, however much you try to convince them to the contrary. I support this opinion and feel that without fundamental revision the draft cannot be accepted. The impression is taking shape that the law was being created even before the time of restructuring and that it is proceeding apart from the tempestuous events of our life and the dissatisfaction of the workers with the economic results of restructuring and their socio-economic position, which has grown worse in recent years. And the position of the trade unions in this climate, if we look at it through the lines of the draft law, not only looks limp and not directed toward raising its influence and the living standards of the people, but even to a certain extent apathetic toward the burdens being experienced by the people. A whole series of suggestions has arisen among us in this regard.

The law should first and foremost not only record the positions that have already been reached, but also take into account the processes that have just come into being in the trade-union movement that will have to be reacted to sooner or later. The phrasing of the law on the rights of trade unions should sound more clear-cut and concrete, not subject to a multitude of interpretations, as is observed in practically every article of the draft law beginning, for example, with the second paragraph of the draft. I think it would be more appropriate to write the law as "to strive for the resolution of socio-economic issues, raise the standard of living of the workers and improve the conditions of their labor, everyday life and rest" instead of "the trade unions... facilitate (what a miserable role for trade unions!) improvements in the conditions of their labor, everyday life and rest..."

Or how is it possible not to support, for example, the suggestion of the comrades from the trade-union obkom of the employees of state institutions to grant the VTsSPS the right (and even make it an obligation!) to determine, in conjunction with the appropriate state organs, a minimum wage for workers and, proceeding from that, to demand the establishment of a minimum level for wages, pensions, stipends and benefits.

The position of the trade unions should be well-defined and unequivocal on this issue in the law—it is necessary to stop "taking the position" of the government, answering all suggestions in one way: where will the funds for this

come from? After all, when the government makes expensive and often unjustified decisions that cost the people many millions in losses, it does not ask for the consent of the trade unions. The government should bear responsibility for the economic position of the people, the more so for a worsening of it, as is happening today.

I would propose in this regard that the law reflect that in the face of a worsening of the socio-economic situation of the workers, the VTsSPS will have the right to pose to the USSR Supreme Soviet and the USSR Congress of People's Deputies the question of an expression of no confidence in the government of the USSR and its chairman. In the event of the rejection of the suggestions, the VTsSPS should have the right to declare a general strike.

In other cases, the right to stop or, even better, to annul the effect of administrative decisions by state, business and cooperative organs if they were adopted in violation of legislation on the rights of trade unions or were aimed at encroaching on the rights and interests of the workers must be granted for the purpose of strengthening the protective functions of the trade unions. Article 29 of the law, "The Rights of Trade Unions to Consider Disputed Issues," and the position of trade unions in resolving them should be set forth more clearly. And we should not fear the word "strike," the more so as they happen here constantly, and we must not substitute for it cunning phrases such as "a temporary work stoppage of an enterprise or subdivision."

We should naturally avoid such an exceptional step for resolving conflicts, but it should be legalized as a method of pressuring an administration to accelerate the resolution of disputed issues with the well-defined establishment of a procedure for declaring a strike, halting it and compensating for wages that is sanctioned by the trade-union committee. We must also envisage the responsibility of the collective and individual members of it for a strike not sanctioned by the trade union—and therefore illegal—with the most serious consequences for its participants.

The law must also, in my opinion, envisage the possibility of creating new trade unions. I think that it could be noted in the first chapter that the decision to create a new trade union will be made by the VTsSPS by petition of no fewer than 50 percent of the workers in this or that profession in an already existing trade union or 25 percent of the representatives of a profession that has no union support.

Article 19 of the draft law, "The Rights of Trade Unions to Organize Socialist Competition," does not hold up to criticism. Its authors—and it is felt that they have an exceedingly vague conception of what they were writing about—managed to include so many contradictions in three paragraphs that no wise man will be able to understand after reading it just who should engage in competition or why it is needed. And if you think about it, is it needed at all and is it a function of the trade union?

Questions of the mutual relations of trade unions and cooperatives are, in my opinion, poorly reflected in the

draft. It is felt that the VTsSPS apparatus has no well-defined position on this problem, and that is reflected in the draft law as well. What are we hoping for, the inclusion of rapid amendments to an already-approved law? I think that will not happen very soon, and another unresolved problem will appear for a long time.

Our positions on issues of pension support for workers should be clearer as well. This is one of the issues most in conflict, and the problems herein moreover usually arise due to blunders or carelessness by representatives of administration. We often acknowledge this, but we cannot restore justice due to the inflexibility of social-security organs stoutly defending the requirements of directives. And so many people have been, as a rule, up to five years late in receiving the opportunity to go into well-earned retirement for this reason alone.

The law, in my opinion, must also provide for and protect the rights of trade-union workers that have been released, since the provisions currently in effect do not work: a principled trade-union delegate often proves to be unprotected. I therefore propose that in the event an elected trade-union worker is not offered suitable work upon the expiration of his term of authority (naturally, if it has not been broken off by resolution of legal organs), then for the entire period until he is offered such work he be retained in continuous work service and paid an average wage at enterprises and organizations (through their wage funds) or at echelons of the rayon trade-union committees and up (through the trade-union budget). This step is essential insofar as the problem of selecting an active, competent and principled trade-union worker has become acute today.

These are only some of the suggestions that arise in the course of discussing the draft law on the rights of trade unions in the USSR.

It is possible that I am mistaken, but the feeling will not go away that the preparation of the draft is simply the next concession to the requirements of the need for such a law, and people have no genuine vested interest in its quality preparation. Over the time since the draft was published, not a single worker among those from the VTsSPS here has taken an interest in the fate of it. Even the trade-union press, even including the respected newspaper TRUD, is devoting too little attention to this.

And until the law is adopted, we must rely more and more decisively on the existing provisions on trade unions, and first and foremost, the protective ones.

#### Rethinking Unemployment, Social Justice

18280263 Moscow LITERATURNAYA GAZETA in Russian 2 Aug 89 p 11

[Article by Stal Yershov, doctor of historical sciences: "Full Employment: Does it Promise a Healthier Economy?"]

[Text] In attempting to reinterpret our past and to understand the present we unavoidably run into the

necessity to eliminate the stereotypes that are deeply rooted in our consciousness. However, the rejection of dogmatic concepts about the nature of socialism has been one of the most difficult tasks. This includes, for example, the idea that there are advantages characteristic only of it and victories only accessible to it. Having had their beginning in the memorable period of stagnation of absolute like-mindedness, these categories long ago moved away from the arsenal of pure science into an extensive "operational space," and now determine the method of thinking and living of many people.

Incidentally, it seems to me that we have already dismantled a number of advantages. The crisis situation in the economy finally brought us to the realization that plan-centralized administration of the economy is replete with serious disruptions at the current level of development of our production forces. We need only to look at the progressive disappearance of basic goods and services, the deterioration of their quality instead of planned growth and improvements. It has come to an almost universal introduction of a coupon, that is to say a rationing system. And this is almost half a century after the war, whereas the countries that were losers in the war are swimming in abundance...

Hasn't the time come to think about the victories? For example, about victories such as full employment? As for free health care and education and "the best" social security "in the world," the pitiful state of these vitally important spheres of our existence today is openly acknowledged even by their directors—the ministers—without a blush. But as we can see, to turn away from the comforting pride of the argument that at least we do not have unemployment, is still something unbearable. And statistics confirm that this "vice that is organically inherent in capitalism" has been fully and completely eliminated in our country.

Accordingly, we have rooted it out and will not tolerate it. As if we, the people, through our discretion are free to reshape the laws of economic development, laws that not only arise and operate objectively, i.e., apart from our will and consciousness, but that also demand our unreserved subordination. Not only are these laws objective, they are also universal.

I dare to propose that one of the main reasons for our failures, which developed as long ago as the 1920's and 1930's, was our attitude toward Marxism as if it were scripture. Having accepted this creative teaching as the main teaching, we pulled it into the narrow framework of indisputable doctrine and to please the latter we constructed ferroconcrete theses for all aspects of life. Those that apply to the given subject include, "Unemployment and socialism are incompatible," "If we tolerate unemployment, what do we need socialism for?" and "For socialism full employment is a self-contained value, for its sake we must make any sacrifice..."

Respected followers of the aphorisms that you have polished to an ideological shine! Is it tolerable to substitute decrepit propaganda maxims for the logic of economic

development discovered by the classicists and not to see that almost half of the population of the country has an income that barely keeps it on the brink of poverty? It was terrifying to watch a television program from Leningrad, where a charitable cafeteria was organized for poor old people. Without moving from the bowls of free soup, they fervently gave thanks for the care. My God, is this compatible with socialism?

Full employment is generally presented by our science as an indispensable consequence of public ownership of the means of production. This doubtful theoretical design, like a number of others similar to it, is based on the confirmation of the possibility of utilizing—and only socialism can do this!—of economic laws. It looks like in the course of implementing such theories no one was embarrassed about their, gently speaking, poor correspondence to reality. After all in actual fact socialism does not rule out the existence of the unemployed. Judging by everything, we are beginning to just barely create this, as we like to say, bright future. Meanwhile we are in a transitional state.

Recently a new original concept has become common—"socialist employment." It seems that it differs from its capitalist antipod in its humane nature. What have we been fighting for? For respect for man! This kind of humanism looks very unconvincing on a background of crowds of "socialistically employed" elbowing each other after the work day in empty stores. Or maybe this is respect for human dignity? No, for this elevated moral category we must first and foremost create a firm economic foundation.

The right to work is usually interpreted by us as one of the essential characteristics of socialism. "Then why is this fundamental thesis absent from your constitution?"—only yesterday we gloatingly asked our ideological opponents, and not receiving an articulate response we enjoyed the feeling of our own superiority. The opponents shrugged their shoulders perplexedly. And really, what could they say if the right to work was understood as a government guarantee that an individual would receive monetary upkeep not directly dependent upon the amount and quality of his labor services or their usefulness to society?

A genuine right to work is truly sacred. Deprived of its ideological exterior, it must presuppose providing each member of society with a real opportunity to work productively, depending on the amount of education he has received and the vital forces and creative energy allotted to him by fate. Material compensation which corresponds to an individual's specific usefulness will provide for his economic independence and thus his human dignity. In the opposite case this great law, no matter how beautiful its legal formulation, will not work. This, unfortunately, is what we have learned from our own experience.

Today, when in our society a complex process of reexamination of many concepts of socialist rights has begun,

isn't it time to liberate ourselves of their propaganda interpretation? In other words, deidealize common sense. A careless faith in the truth of stagnant postulates must finally give way to a sober, scientifically-critical assessment of the problems that have crashed down upon us.

Thus, back to full employment. Everyone is working. Yet the country's standard of living is nearly the lowest in the developed part of the world. Why is this?

Of course, full employment is by no means the main or the only source of our problems. But how often do we have to hear the sorrowful laments of directors and even of common workers in institutions and enterprises that the most varied structures could function normally or even better if the labor collectives were much smaller. Special terminology has already appeared in science, ranging from the careful "superemployment" to the neutral "ineffective use of labor resources," "concealed surplus," and "intra-production manpower reserves" to the openly acrid "false employment" and "concealed unemployment."

After the terminological quest came the first, understandably still timid, attempts to determine at least the approximate scale of this absurd economic phenomenon—10 million people. With reason to this figure we could add the workers of unprofitable or low-profit enterprises. While basically not adding anything to the national product, they are also utilizing it, after all.

I will clarify. I am not talking about people who do not have a job—those who have been laid off from their previous job and are looking for another but who are not taken into account in unemployment statistics because for some reason that is difficult to explain such statistics do not exist in our country. Also this does not mean those who do not want to work at all—bums, scourges and other *declassé* elements. That is a totally different problem.

I am talking about an enormous army of people numbering many more than the population of a country, say, like Belgium. I am talking about an army that in the course of the entire 8-hour work day in enterprises and institutions is occupied not in socially-useful labor but in its imitation. A significant portion of the "soldiers" of this army, not participating in the creation of national riches and only putting in the necessary time at the work place, is not unwittingly guilty of anything. Nevertheless, where should we seek the sources of this monstrous economic pathology? We have placed millions of capable workers into a situation in which they receive a raise from year to year (according to data from Goskomstat [State Statistics Committee]) that they have not earned, plus almost automatically, quarterly and other bonuses, and in which they utilize that which they have not produced.

Despite the despairing appeals and strict injunctions to pay exclusively according to quantity and quality of actual production output, the pace of wage increases

continues to noticeably surpass the pace of growth in labor productivity. In other words, together we are using more and more than we produce each day! The demand that is growing steadfastly but that is not covered by the availability of goods encourages an inflation spiral. This is nothing other than placing a slow-acting mine into the body of our economy. Its clock is ticking louder, more alarmingly.

Indisputably, in and of itself the thesis about the right of every individual to work does not give rise to any objections. But questions do arise. Do all have to be equal in the face of this law? Can't it happen that someone is trained in a field that at the given moment is no longer useful for society and can no longer be used by him productively? This is especially possible since the "life" of many work specialties under conditions of the NTR [Scientific technical revolution] have decreased sharply. Entire sectors of the economy die away, the administrative apparatus that has swelled up to incredible limits has had to be trimmed down (sometimes through a forceful mine blast), and the army is being curtailed. Summarizing all of this, we will probably not err if we added Sweden to the aforementioned Belgium.

How can we unravel this tight knot of problems? What can we do to at least reduce to a minimum the "concealed manpower surplus" that is increasing in size like a snowball rolling down a hill?

Contrary to popular belief, a panacea does exist. Within the economic sphere this is the market, its highness the common market that encompasses both the means of production and manpower. It is this kind of economic structural model that developed in capitalism. We cannot do without it, especially since the abyss of problems we have accumulated cannot be overcome by two small jumps. And there is no need to feverishly leaf through "Das Kapital" or other works of our founding fathers. They are the repository of wise thought but not a guide to the techniques of socio-economic security.

As world experience shows, only the market is capable of being a true regulator of economic development. Everything else, including planning—and even capitalism cannot do without planning in a certain form—is secondary, an auxiliary. Let us look truth square in the eye—our many years of trying to substitute planned use of manpower for a free labor market has not brought about any noticeable positive results.

On the scale of our immense economy what besides the market is strong enough to carry out functions such as the timely redistribution of immense masses of workers among enterprises, branches and regions? In the face of scientific and technical progress, who can predict how the needs of the economy will change tomorrow, a year from now or 20 years from now in terms of the quality and quantity of manpower?

In any case it cannot be done by Gosplan. This institution, as has been recently revealed, is not even fit to plan the production of toothpaste and soap in the necessary

quantities, even though it would appear that a computation of the quantity of these goods, used annually by 285 million people, would not be at all difficult.

Having grown accustomed to demanding everything of the government, we have developed a feeling of our own lack of responsibility, of non-implication in what is happening around us. If there is no sausage, if people are rude in the laundry where is Soviet power looking? However, it does seem that the ranks of supporters of such a "principled" position are gradually thinning out. The conviction that the difficult burden of supplying the people with consumer goods and services should be placed on the shoulders of independent producers is becoming more widespread. Then things will start happening, as they said during the NEP period! In competing with each other producers will offer us their products while vying with each other. The one who offers the most and best quality goods will sell them most advantageously. He will make a fortune? More power to him!

But the main thing is to simultaneously apply that same market principle equally to possessors of a "special commodity," as political economy refers to the ability to work—manpower. The rarer this commodity is in terms of training and profession, the higher the utilization value and the greater the material compensation the possessor of this commodity, the worker, will be able to count on.

Our own government has essentially completely excluded a free labor market from the economic life of the country under the pretext that it seemingly does not correspond to the principle of social justice. While guarding our ideological innocence we have broken down the national product via full employment, and this has been done almost equally by those who produce it as well as by those who are only making believe that they are participating in production. The result has been a gradual but steadfast fall in the worker's interest regarding the quantity and quality of his labor, with all of the consequences arising from this.

No, we cannot live this way any longer. We also do not have any alternatives.

What does the introduction of a free labor market mean under our conditions?

First of all, it means the unhindered transfer of people among employers—state, cooperative or other, a transfer that is not limited by any artificial impediments such as the notorious registrations. Secondly, a wage system should be established everywhere that contains no instructions at all from above, and that is based on individual (or collective, with the participation of the trade union) agreements among parties which take into account only their own economic interests. Third, enterprises and institutions should have the right, with the direct participation of labor collectives, to determine the number of workers they need. It is not difficult to imagine that this will result in the development of a particular reserve labor army, i.e., unemployment.

Here, evidently, it would be appropriate to state that the market is not just a key without equals to improving the effectiveness of the economy. The market is also a unique culture of relations among people. Severe and uncompromising, it brings into action the great instinct of self-preservation and dictates the conditions of battle for survival. Only the minute-by-minute increased mobilizational readiness of each worker can bring him success in the marketplace. There is no kind market. Victory or defeat—there is no third alternative.

The immutable law of the market, "either - or," puts us on guard because we are used to humanism by guardianship, to psychological comfort at the expense of the generosity of the government. If only there were sufficient material goods to match the longed-for guarantee of "social protection" that has taken root only in our country. But where will this sufficient prosperity come from? Will it fall from the sky?

An integral part of the market culture is the branched system of overall support of the worker who temporarily cannot find a use for himself in public production. Today those who have suffered market hardships even in capitalist countries are not made to suffer at the hand of fate. In Belgium, for example, for a certain amount of time such a worker is given 80 percent, and in Denmark—90 percent—of his previous wage. Almost everywhere there are subsidies for children and for other unemployed family members. The search for work in the worker's specialty is made easier by electronic data banks. Subsidies are provided for retraining and so forth.

There is no argument that to be unemployed is tragic for anyone. But in civilized countries people have learned step-by-step to mitigate this kind of tragedy, although not everything is always possible. Who is stopping us, having considered world experience, from improving a system of genuine and not imaginary social security for people?

The capitalist world faced the problem of a sharp exacerbation in unemployment long before we did. Decreased demand for manpower in general and lack of training in particular during the transition from extensive to intensive types of development is completely natural, and moreover, it is unavoidable. In the difficult but constructive struggle with each other firms and trade unions are gradually feeling their way toward solving the problem. In the FRG and France, for example, it was calculated that the number of jobs can be increased by means of curtailing the work week (while maintaining the previous level of wages), by means of decreasing the retirement age and by increasing the number of paid vacation days and holidays. In Great Britain and Italy experiments are being conducted with various forms of private property and a flexible work schedule. In the U.S.A. a great deal of attention is being given to the retraining of workers who have been affected by new technology.

However, I repeat that all of these measures must be examined only as a means of mitigating unemployment,

which is practically unavoidable with healthy economic development. No matter what our attitude is to this conclusion, is it accidental that in all of the capitalist countries that are significantly ahead of us there has always been a particular reserve of unused manpower? The concept of full employment in the West tolerates an unemployment rate of 4-5 percent. Even in little Switzerland, with its high standard of living, in 1988 there were over 22,000 officially registered unemployed, and in Sweden—72,000.

How can we explain this sad, as we are convinced, fact? By the defects in structure? It may be. But to a large extent the explanation lies in the fact that capitalism has spontaneously come to a solution of the basic problems in economic development, having established that the only goal of economic development should and must be a high level of

effectiveness. If the fruits of effective labor were at the disposal of society, society would find a way to use them.

It may appear that the author is in favor of an unreserved introduction of unemployment in our country. Not at all. Although the turn of events in fraternal Hungary has been very instructive—there they dared to take such a serious step and did not move away from their intentions to continue socialist building. It turned out that one does not contradict the other at all.

At the same time the author is certain that life itself has placed on the agenda a rejection of the ostrich-like policy of supporting fictitious employment, of the deceitful concept of social justice and support of a frontal healing of our old diseases. If the diagnosis is correct, what means can we select to guarantee a complete return to health?

## ORGANIZATION, PLANNING, MANAGEMENT

### Minister Explains Problems in Domestic Machine Tool Production

*18230073 Moscow SOVETSKAYA ROSSIYA in Russian 25 Aug 89 Second Edition p 2*

[Interview with USSR Minister of the Machine Tool and Tool Building Industry N.A. Panichev, by D. Usachev: "You Have Been Entrusted the Portfolio of a Minister"]

[Text] All of those who have followed closely the work of the first session of the USSR Supreme Soviet remember how tortuous the procedure of nominating the minister of the machine tool and tool building industry turned out to be. Initially, the chairman of the Council of Ministers left the position of the minister of the machine tool industry altogether vacant. However, by the mid-point in the work of the session this decision was revised; the head of the Soviet government saw fit to accept the results of a meeting of industry representatives, directors and meritorious employees, who were convinced that it was most expedient to entrust the portfolio of a minister to N.A. Panichev again, just as it was done 3 years ago. Members of the Supreme Soviet confirmed his candidacy. Nonetheless, the nomination was accompanied by sharp criticism of the operations of the industry.

Minister N.A. Panichev says: "The criticism was fair. One needs to visualize what our industry means for the entire machine-building industry and for the national economy as a whole. At the mundane level, they have a poor knowledge of us at present. However, at present not one industry can get anywhere without us; we are now the focal point of all other machine-building programs."

The agricultural machine building industry has embarked on modernizing its pool of machine tools; automobile plants have suddenly decided to change all the models which leave their assembly lines. There is no argument, we cannot do without this. The Elabuga Subcompact Car Factory is also necessary. However, any new model of a machine calls for equipment.

### More Machine Tools, or Better Machine Tools?

[Usachev] We may call your industry machine building for the needs of machine building.

[Panichev] This will not be stretching it. However, it is not just any machine tools that are needed as long as they are many. As it is, there are only 60 machine tool operators in our country per 100 machine tools. This means that such equipment is needed which would give an opportunity to service many machine tools, so that the nature of work of, say, lathe and milling machine operators would become more attractive. Otherwise, young people would not be enticed to operate machine tools. They expect from us flexible technologies which make possible quick adjustments in production for turning out new kinds of products. The overall concept

of the technical and production policy of the ministry is aimed at reducing the total number of machine tools by a factor of 1.5 by the year 2000 while maintaining the number of machine tool operators in the country at the 1985 level. In the process, the growth of output of the products of machine building and metal processing by a factor of 3 is going to be ensured. That is, we have to profoundly change the qualitative structure of the machine tool pool in the national economy by raising the share of automated equipment with built-in electronics and reducing the share of machine tools with manual control. Such a replacement will make it possible to automate serial and small-series production, the share of which amounts to 75 percent of output. The shift coefficient of work will increase, one operator will service many machine tools...

[Usachev] Carrying out such a program calls for considerable capital investment.

[Panichev] Let me explain what the situation with the machine tool industry has been in this 5-year plan. Along with instrument making, electrical equipment production, and the electronic industry, we were declared a priority industry; this was laid down in the resolutions of the 27th Congress of the party. Of course, they have allocated capital investment to us for development, but its absorption has been prevented by the weak design and construction facilities.

In general, they invest less in our industry than they take from it. What do I mean? In terms of the rate of growth of commercial product, we move up faster than the machine-building industry and metal working as a whole. However, in terms of the rate of growth of fixed productive capital—and this is exactly an indicator of centralized reinforcement of an industry—our curve is the most gentle one, we are falling behind everyone else. Other ministries which are under the Buro for Machine Building got reinforced much more substantially than we did, while giving considerably less than us.

So, by now this disproportion has become apparent. The machine-building industry needs a profound retooling, and we are not managing to meet the sharply increased need for equipment. What is the way out? Should the state again spend hard currency and purchase machine tools abroad? We believe that this should not be done. Let us survive another 2 to 3 years; let us channel the same funds into developing the fundamental industry such as the machine tool and tool building industry is, and let us have our own, domestic equipment. We cannot yield to the desire to secure an advantage this very minute; it is much more far-sighted to reinforce our key branch and provide a genuine priority status for it. The ministry also has to defend such simple truths. For the 12th 5-year plan, considerable funds have been allocated; however, their distribution has been planned in such a manner that the bulk of them falls on the last 2 years. This is why returns on them cannot be obtained at present. However, we have worked out a strategy, albeit with a delay, and have led the industry in the direction

needed. If a break in our technical policy occurs now, we will inflict irreparable damage on machine tool building.

[Usachev] Let us imagine that the resources will be redistributed in favor of the accelerated development of exactly the machine tool industry. However, are you not betting too much on investment augmentation? To what degree are the enterprises and associations of the industry interested in changes?

[Panichev] This is the main element of the perestroika process at present; it was for a reason that the session of the USSR Supreme Soviet considered as its priority the issue of making additions and amendments to the Law on State Enterprises (Associations). You know, at present you do not have to agitate a minister in favor of perestroika; we are seeking all possible ways here in order to bring about a turnaround. However, the material production sphere is at enterprises. Unless they feel over there that the changes are necessary any suggestions from on high are going to be extinguished without making a ripple.

Recently, director of the Sterlitamak Machine Tool Plant Vladimir Nikolayevich Zharinov visited me here. He just came back from training in the FRG; our directors went there in two shifts to gain knowledge. So, we started talking and recalled the stock phrase about the worker being supposedly the master of production. However, thus far it is a hollow statement.

So, the director from Sterlitamak made a proposal: To dismember his large plant and create a Soviet concern. Twelve independent companies with a complete cycle of production will belong to this concern. They will issue shares which any of the employees will be able to buy. At their general meeting, they even resolved to use some segment of the thirteenth salary [annual bonus] in order for everybody to have shares if possible. Anybody who wants to invest 1,000 rubles is welcome to do so; after all, he will receive interest on that. After the shares are sold, the board of directors will sign a contract with every worker in which it will be specified that you, the name follows, being a shareholder, undertake to discharge the following responsibilities, and, for its part, the administration undertakes to do the following for you.

This is a great endeavor. First of all, the worker becomes a co-owner of the plant; secondly, a legal document—contract appears. Man becomes an interested person.

#### Ministry or Associations?

[Usachev] The common opinion is that the independence of enterprises and the very existence of ministries with their current functions are incompatible.

[Panichev] I believe that at the current stage it is incorrect and not timely to advocate the elimination of ministries. It may be that years from now the ministries will become unnecessary in the form which they have assumed by now. Currently, the ministries are still doing the work of enterprises in many instances and are

discharging dispatching functions; the rigid system of quotas also prompts this. We cannot channel a single unit of our products to the free market; everything from beginning to end is allocated. However, the quota system will die off; it is an anachronism. At present, 85 percent of equipment goes to newly constructed facilities, and in a majority of cases is not used for many years. Reductions in the volume of new construction, referred to in a principled manner both at the Congress of People's Deputies and the session of the USSR Supreme Soviet, will allow us to free up not only the financial resources, but also the equipment and other products of our enterprises.

[Usachev] What should the new functions of ministries consist of?

[Panichev] We have now embarked on a serious reorganization of the apparatus of the ministry and its structure; a considerable staff reduction is in store for us. Ultimately, a partnership should be established between the ministry and the enterprises, so that the plant would be interested in me rather than the other way around, so that the plant council of the labor collective would know that in any case it can approach the ministry and receive skilled support—if it needs assistance in cadre training, in a complex research study, if it needs to enter the outside world or get in touch with a cooperating industry quickly and advantageously.

Some people are greatly irritated by the word “ministry.” However, what's in a name—let us form associations or, say, concerns instead. For as long as we have not trained the plant director or “company man” for independent work, for as long as the market has not formed, we will not be able to get rid of the ministries.

[Usachev] The question is often asked about the way in which the ministries use the funds transferred to them by enterprises out of their profits.

[Panichev] In the course of it, they paint the picture of ministries supposedly engaged in something close to the arbitrary appropriation of profits and their redistribution in keeping with their whims. Indeed, some redistribution of funds within the industry does occur; however, it is envisaged by the 5-year plan of financing the costs at enterprises which suffer from the lack of their own resources. In our industry, such funds account for one-quarter of the entire contribution to the ministry from profits.

Concerning the rate of contributions, the Gosplan [State Planning Committee] set it for this year at a level of 54 percent. This covers all kinds of contributions to the state budget from profits. The ministry gains 6.6 percent of the profit of plants and associations. You see, we are not the ones to take the bulk of contributions away from enterprises. How is the ministry using the funds received? First of all, the apparatus keeps nothing for itself. Research and experimental design work which is of common interest for the industry and individual

sub-branches and which determines the prospects for development is financed from these contributions.

[Usachev] You would agree that all is not right when strong enterprises are forced to maintain those operating at a loss.

[Panichev] I agree that this is not fair to the profitable plants; however, these are the real circumstances under which we need to complete the 5-year plan. The point is that many of our collectives found themselves in the debt hole through no fault of their own, but as a result of that same command system of planning. For the 5-year plan, they planned a tremendous growth of production for us, and the size of profits was derived from the rate of growth. However, the leap did not come about; it could not come about—I have already mentioned this, whereas the rates of contribution until the end of the 5-year plan are kept at a level such as if our enterprises were generating good profits. I believe that it would be equally unfair to leave the enterprises which have found themselves without the means of support due to a misunderstanding to face their troubles alone.

[Usachev] During your nomination at the session of the Supreme Soviet you said that the enterprises of your industry should build mutual relations with subcontractors on the basis of mutual economic advantages. To this end, 15 percent of the products manufactured, which could be sold directly, should be definitely left at their disposal. What will this accomplish?

[Panichev] At present, relations with subcontractors may only be based on mutual interest. This is all the more serious for us, since we have very stringent technical requirements for the producers of subcontracted parts. Such is the peculiarity of our industry. If we need bearings, then they should comply with the requirements of absolute precision and rigidity—these are the most precise bearings.

Here is one more "inconvenience" for our partners-suppliers: The size of series in our orders is quite small. We demand the best quality whereas the advantage we offer is minimal, because all production-sharing industries are geared exactly to large-series and mass production. Take electric motors. We need a dozen thousand, perhaps, a hundred thousand pieces, whereas the Ministry of the Electrical Equipment Industry is used to operating in terms of series of motors going into millions. Of course, the subcontractors should feel that we are advantageous partners, and in the process the opportunity to distribute some of the machine tools will be a help to us. As of now, we are not only unable to retain a machine tool for an exchange with the subcontractors, but we also have nothing for our own needs. At our enterprises, about one-half of the pool of machine tools should be retired as worn-out. Many people cannot understand how the producers cannot provide equipment for themselves. However, such is, unfortunately, the practice of distribution in our economy.

[Usachev] You have stated a concept of creating your own sub-branch producing electronic control systems and electric drives. Is this not a return to subsistence farming?

[Panichev] Let me explain what quality subcontracted parts and good materials mean for us. Even regular paint, which we do not have either, greatly affects the competitiveness of our equipment in the world market, to say nothing about the control systems on which the image of the Ministry of the Machine Tool Industry and Tool Building depends to a decisive degree. There is a passive way: Wait until our subcontractors develop new control systems, and for as long as they are working on developing such systems, rely on imports. This is how we purchase abroad electronic devices for sophisticated machine tools. There is another way out: to build up our own research and production facilities. In general, the production of electronic control systems is associated with developing extensive programming, and to this end we need to know the design of the machine tool, peculiarities of the operation of equipment, and the technological process of processing parts. Our specialists have mastered this set of issues better than our subcontractors.

We are now building two plants for the production of complete control systems in Moscow and Leningrad; foreign companies have been contracted in order to outfit them. We are planning to produce complete control systems for sophisticated and unique machine tools and other types of equipment, for the equipment of new generations.

#### **Stabilization or Reforming?**

[Usachev] You have shared many concerns with us, and yet you had reasons to state at the session of the Supreme Soviet that the situation in the industry has stabilized. What did you mean by stabilization?

[Panichev] The financial situation of enterprises has improved somewhat. I have already mentioned that. In the [first] half-year, a respectable rate of growth of the volume of output compared to the first half of last year was ensured—106.8 percent. During the 3 years, the production of machine tools with numerical program control and processing centers has been augmented at accelerated rates. The production of rotor and conveyor lines has been mastered. We have begun to produce more tools of the most progressive varieties—combined, with wear-resistant coating. The bewilderment caused by the transition to economic accountability in the industry has abated; the enterprises have been acquiring the experience of operations in the environment economic reform.

[Usachev] At the last meeting of the ministry collegium, I heard you criticize the work of the apparatus: Deeds are frequently replaced by their appearance, and reliability is not always up to par. What is the direction of the planned reorganization of the apparatus, which qualities do you try to ensure in it?

[Panichev] I expect the apparatus to be professional and have a short response time. We expect to change the

structure of the apparatus in such a way as to eliminate the elements which have become unnecessary or are duplicated, to concentrate at the steering wheel of the industry the most qualified cadres, capable of resolving the issues which arise independently rather than collecting information. In the process, we are bringing back the institute of chief specialists. What do we mean by this institute? Say, the issue of equipment for the production of disposable syringes has arisen. A group of knowledgeable people with initiative has been created, headed by Deputy Chief of the Main Technology Administration Nikolay Pavlovich Shilov. I have delegated to him the powers of an aide to the minister, and have given the group the authority to make ad-hoc decisions. There is no need to coordinate them with anybody.

[Usachev] An argument has long been under way about what the director should be. An economist? A technology specialist? A psychologist?

[Panichev] ...and a builder, an agronomist, a diplomat, and a merchant on top of this.

[Usachev] Nikolay Aleksandrovich, what should the minister be first of all?

[Panichev] Once again, a professional, all the more so in our technically complex industry. It cannot be otherwise. You have to know the status of the industry, its problems, and its place in the national economy. The minister should be receptive to everything that is new and progressive, capable of organizing the business, leading the people, and ensuring compliance with the interests of state. This is, perhaps, the main point. In general, the scope of issues which the minister handles is quite extensive.

#### Machinebuilding Sector's Problems Analyzed, Solutions Proposed

18230066 Moscow EKONOMIKA I  
MATEMATICHESKIYE METODY in Russian  
No 3, May-Jun 89 pp 445-453

[Article by S.A. Kheyman, Moscow, under the rubric "National-Economic Problems": "Topical Problems in Restructuring the Machine-Building Complex"]

[Text] Machine building creates the principal body of tools and means of labor, the technology equipping the non-production sphere and the everyday life of people and an overwhelming portion of the means of defense. It should be an important supplier of export products. This defines the importance of a critical analysis of the contemporary state of this sector and its capacity, internal structure and level of production organization.

It is essential, in discussing the problems of machine building, to consider not only its enterprises, but also the whole inventory of metalworking equipment (MWE).

Analysis makes it possible to draw a first most general conclusion: there exists today a striking contradiction between the abundance, even over-abundance, of production, material and labor resources at the disposal of our machine building and the just as much of an abundance of unsolved and as of today insoluble problems. The technical level, precision, reliability and longevity of many types of domestic technology lag markedly behind world levels.

The USSR must import an exceedingly broad selection of equipment, and it is almost the sole developed country that has a large negative net balance of trade in machinery exports and imports, which is continuing to grow. According to the data of [1, pp 641, 643, 647], it is not difficult to compute the negative net balance in equipment imports and exports at 1 billion rubles in 1970, 7 billion in 1980 and 16 billion in 1986. Their magnitude, quite striking, distinctly demonstrates the harm being inflicted on the domestic economy by the poor market competitiveness of the products of Soviet machine building.

Its qualitative features—labor productivity and return on investment—are also relatively low. The metals-intensiveness of our machinery is significantly greater, and the degree of productive utilization of metals in machine building is behind the analogous indicators for the developed countries.

It is obvious that the model of machine-building prevailing in the USSR is far from the optimal one and requires serious and, at a number of points, extremely radical restructuring. Matters are just as unfavorable in the utilization of the enormous inventory of MWE, a material portion of which is being operated outside the bounds of machine building itself.

#### The Contemporary State of Machine Building

Our machine-building industry has the largest inventory of MWE in the world and the largest army of workers and machine-builders/engineering and technical personnel. According to the data from an equipment census of 1983, this inventory surpassed the total inventory of the United States, Japan, West Germany, Great Britain and France taken together in number of units. The output volume of machine-building products in the USSR has totaled 75-80 percent [2, p 21] of the analogous indicator for the United States in recent years, however, while metals consumption in machine building in the USSR, according to the rough calculations of the author, is 25 percent more than that of American machine building [2, p 22]. The output return per unit of MWE inventory in the USSR, i.e. the productivity of its capacity, is thus 2.2-2.3 times less than in the United States.

It is obvious that the correlation described above is determined by the comparatively lower technical level of the production apparatus of machine building and its structure and organization. The economic impact of the

MWE inventory is conditioned not only by the quality and technical level of the equipment, but also its disposition.

According to census data of 1983, 42.8 percent of the entire MWE inventory is outside the bounds of machine building in the USSR [2, p 25]. This equipment is being used in the repair shops and services of the most varied sectors of industry and the national economy. Two important circumstances should be noted. First of all, the MWE inventory is younger than that in basic machine building. This is connected in particular with the fact that the practice of selling and transferring obsolete or unnecessary equipment outside the bounds of machine-building enterprises is almost completely lacking in the USSR. Second, equipment utilization in the mechanical services of non-machine-building enterprises, i.e., in the "subsistence economy" sphere, is extremely unsatisfactory and comprises 0.3-0.5 of a shift or 2.4-4.0 hours/day [2, p 26]. If you take into account that the number of units in that inventory numbers in the several millions, you can imagine what enormous reserves of production capacity are hidden in the sphere of that economy.

Its machine-building sector is not exhausted by the values mentioned above. There are also elements of the subsistence economy at the enterprises of the sector themselves: equipment, repair and tooling shops in which the plant produces replacement and repair parts and assemblies, and tools and process tooling for in-house needs. The inventory of this part of the economy, according to the census mentioned above, comprises about 30 percent of the MWE inventory of machine building, or roughly 17 percent of the whole MWE investment of the country.

Almost 60 percent of the whole MWE inventory is thus actually being operated outside the bounds of the basic machine-building shops. This signifies that domestic machine building is utilizing about 40 percent of the MWE inventory for the production of new technology. It seems that this is one of the greatest and most important disproportions in the economy of the USSR, which is forcing us to increase the volume of investment in creating new machine-building capacity considerably.

Also interesting is the fact that just 16.8 percent of the MWE inventory in the United States is operated outside of machine building, i.e., 3.6 times less in relative terms and 6.5 times less in absolute terms [3, p 115].

This situation is determined by a number of causes.

First of all, the overwhelming majority of the machine-building plants and associations in the USSR do not provide the essential set of replacement and repair parts and assemblies for the equipment they put out.

Second, the production of tools and process tooling occupies an unaccountably small part of the structure of machine-tool building. This forces enterprises that use the given equipment to produce replacement and repair

parts and assemblies, tools and process tooling using their own manpower. Such "in-house products" are naturally distinguished by poor quality, inadequate technical level and short service life. Other sectors of machine-tool building also "suffer" from the same "disease"—they produce almost no replacement parts and assemblies for the equipment they put out, as well as tools or tooling.

Third, the servicing of machinery under warranty—guaranteed maintenance and repair—is still basically lacking in machine-building sectors.

Fourth, there are no conditions for an economical, "genetic," so to speak, modernization of the equipment being produced. Standard "mating" positions for the later replacement of parts and assemblies are not envisaged in planning them (or subsequent generations).

The manufacture of the additional quantity of replacement and repair parts and assemblies essential for modernizing machinery of that type already in operation is not planned in the production of new generations of machinery.

The production of various types of unique technical equipment using in-house manpower—the need for which arises quite often at enterprises, scientific-research institutes and design bureaus in various sectors of the economy, since orders for such types of technical devices cannot be placed at conventional machine-building enterprises—occupies no small place in the machine-building sector of our subsistence economy. This situation is explained by the fact that "individual shops" that would accept orders from individual consumers for individual units of equipment are almost completely lacking in the USSR.

One reason for the development of the subsistence economy, not only in machine building but outside it as well, by the way, is the intolerably little attention devoted in the USSR to the time factor and suppliers' fulfillment of their obligations on time. The effects of that factor on the hypertrophy of the "subsistence economy" of machine building in the USSR are quite great.

It is obvious that the prevailing model of our machine building is extremely inefficient and in need of radical alteration.

#### **Ways of Improving Machine Building**

The poor productiveness of machine building, along with the hypertrophy of the subsistence economy, is connected with a number of causes of an organizational nature.

The inadequate levels of parts and technological specialization and the standardization of parts and assemblies is reducing the extent of mass production.

Departmental parochialism is highly developed in machine building, as in the rest of industry in the USSR. The level of standardization of homogeneous types of

machinery is exceptionally low or lacking altogether at plants in one and the same sector that are part of the same ministry. This concerns the output of motor vehicles and tractors, among others. Aside from the fact that such a situation limits the opportunities for the mass production of parts and assemblies, it makes the exploitation of the equipment a great deal more difficult as well. They are forced to store and employ an enormous mix of parts and assemblies on the kolkhozes, which make use of the tractors of various plants.

Gosstandart [State Committee for Standards] is also not devoting the proper attention to problems of broad standardization of equipment parts and assemblies. There are no statistics describing the level of standardization. The corresponding data on losses are not published. Western European firms producing motor vehicles obtain the greater portion of their drive shafts from England. Designers here frequently receive bonuses for a high level of originality of parts. In the developed countries those designers who make maximum use of standard assemblies are encouraged. The bearing industry is a model of the solution of this problem in the USSR. Designers here, as a rule, turn to existing catalogues of bearings.

The lag in the development of intersector types of production also leads to the poor productiveness of resources. The amount of mechanical machining is growing due to the limitedness of standard sizes and shapes of rolled ferrous metals and the greater proportionate share of castings, high-grade rolled metal and fine sheet in materials. The quality level of the metalworking equipment utilized and the low level of their equipping with high-torque motors are also insufficient.

World experience shows that radical technical shifts are achieved where a functional approach exists in planning and manufacturing technology. Vacuum tubes were thus replaced with printed circuits and semiconductors, and then microprocessors, in television receivers. The impact came from the fact that they found the most efficient means of accomplishing a given function instead of the replacement of one assembly with another. Without this approach, one obtains "exhibits" of new technology that "look like the genuine article" but are quite far from optimal.

The product range of the equipment being manufactured and operated has multiplied systematically over recent decades. The gradual delineation and fragmentation of "elementary particles" that are present in the most diverse types of technical devices (motors, transmissions, control systems and the like) has been taking place at the same time.

The task of the machinery-sciences scholar is to find these elementary particles and strive consistently to see that new types and generations of equipment are configured from them at a higher and higher level of universality and standardization. This level is unwarrantedly low in the USSR today. The task of the managers and

organizers of machine-building production is to create a network of primarily medium and small enterprises for the output of parts, functional assemblies and modules of modern technology. Such practices have justified themselves and are justifying themselves superbly in the machine-building industry of the United States, Japan and other developed countries.

This network is the most essential "infrastructure of contemporary machine building." It should, along with the specialized production of blanks, tools and process tooling, comprise the core of the whole group of sectors for industry-wide machine building application. M.S. Gorbachev's speech at the June (1987) Plenum of the CPSU Central Committee pointed out the expediency of creating this type of production through cooperation of the means of enterprises and associations.

A description of the contemporary state of affairs in this realm in the United States can be obtained according to the data from the last census. The number of those employed (workers) in the production of trucks and truck bodies in 1980 was 220,600 people, with a nominal net output of 13.8 billion dollars on an investment of 2.3 billion dollars. Some 287,200 workers were employed at the same time in the production of parts and assemblies for the motor vehicles, with a nominal net output of 14.7 billion dollars on an investment of 3.1 billion dollars. Some 88,500 workers were additionally employed in the production of stampings, with a nominal net output of 4.2 billion dollars on an investment of 0.6 billion dollars; there were 25,600 workers in the production of pistons and carburetors, with a nominal net output of 1.2 billion dollars on an investment of 0.1 billion dollars [4]. We do not have data on employment and the output of specialized foundries working for the motor-vehicle industry. Thus, without taking the foundries into account, 401,300 people were working in the specialized production of parts and assemblies for trucks in the United States (1.8 times more than at the truck plants), with a nominal net output of 20.1 billion dollars (1.5 times more than at the truck plants) on an investment of 3.8 billion dollars (1.7 times more) [4].

This pattern looks even more contrasting in the electronics and radio industries. Some 64,400 workers were employed in the production of electronic apparatus and equipment with a nominal net output of 3.8 billion dollars on an investment of 0.2 billion dollars. There were at the same time 336,600 workers at specialized enterprises for the output of parts and components for electronic instruments (2,439 enterprises in 1967, four times the number of enterprises manufacturing the apparatus), with a nominal net output of 17 billion dollars on an investment of 2.8 billion dollars [4]. This is 5.5 times more than the production of the electronic equipment.

The correlation is extremely clear—and the chief reason for the steady progress of the electronics industry in the United States is implicit in it.

Our practices in this realm are still extremely insufficiently oriented toward the machining and specialized output of functional assemblies and parts for electronic equipment. World experience shows that it is namely this that is the main route of systematic progress for contemporary technology.

The tasks of a considerable acceleration of scientific and technical progress and achievement of the highest world technical level as rapidly as possible have been posed repeatedly in the speeches of party and government leaders and included in the resolutions of state and party forums. As follows from the report data, the fulfillment of the projected directives is being accomplished extremely slowly and the achievement of the world technical level is far from drawing nearer. The market competitiveness of our technology in world markets is not increasing. The most complex modern technology (electronics, among others) comes to us from abroad as before.

What are the ways of overcoming these difficulties? Pose tasks, persuade, stimulate and urge every producer? This model has not yet justified itself. It is well known, meanwhile, that such countries as South Korea and Taiwan have reached leading places in the world in the production of contemporary electronics.

Progress in the production of technology is achieved based on the deeper division of labor, production specialization and, first and foremost, a functional approach to the planning and production of that technology. The attempts of our machine builders to resolve the tasks of creating advanced technology using the manpower of their customers is leading to the fact that this type of equipment lags behind foreign models in qualitative features, costs considerably more, takes a phenomenally long time to be recouped and leads to ruin rather than a rise in efficiency.

One well-known example is industrial manipulators (or robots) and flexible automatic production systems (GAPs). The main path for technical progress and the achievement of world levels is obvious. It is the combination of highly specialized production of functional assemblies and parts of the equipment with the conscientious, cultured and highly skilled assembly of technical devices. The United States, Japan and the countries of Western Europe have taken that path.<sup>1</sup> Attempts to skirt it and base machine building on general-purpose plants producing everything "at home" and "for themselves" are doomed to failure.

It should not be thought that all enterprises of the machine-building infrastructure should be constructed anew. A considerable portion of them could be created on the basis of the gradual particularization of shops and sections of the major machine-building plants. This would make it possible to make productive use of the gigantic capacity reserves of the metalworking equipment on hand to a certain extent.

The machine-building infrastructure is its most important link in the rational and efficient model, necessarily

formed **before, and not after**, the broad production of new technology is organized. This is one of the principal ways of limiting the subsistence economy.

Domestic machine building is extremely inadequately supplied with tools and process tooling. Their specialized production is sharply lagging behind the growing needs of the sector both in quantity and in quality. The situation in the United States in this realm is of interest. According to 1984 data, 82,000 workers were employed in the production of machine tools and press-forging machinery, with a nominal net output of 1.9 billion dollars and capital investment of 105 million dollars [4]. Some 140,000 people were working in the specialized production of tools and tooling, with a nominal net output of 2.6 billion dollars and capital investment of 170 million dollars [4].

The production of machine tools and press-forging machinery and the specialized production of tools and process tooling grew over 1980-84: nominal net output by 59 and 107 percent and capital investment by 58 and 134 percent. The sector producing tools and process tooling in the USSR significantly lags behind the production of machine tools and press-forging machinery both in production volume and growth rate.

It is essential to develop the specialized production of tools and process tooling in the USSR immediately and at a significantly faster rate.

The focus in our country has been placed up to now on the development of a comprehensive system of product quality control, and state acceptance has been introduced and the like. Unaccountably little attention is being devoted to the creation of equipment that ensures high product quality—equipment for quality—even though it is namely the resolution of that task that is a material precondition for obtaining high product quality.

This situation is typified entirely by machine building itself. According to census data from the USSR and the United States for 1983, out of 100 turning lathes, 31 were grinding lathes in the USSR, while 66 were in the United States; the values were 4.5 and 15 for finish tools. The situation is the same for equipping the rolled-metal shops of ferrous metallurgy with finishing equipment, the timber industry with drying and impregnation equipment, etc.

The quality of the means of labor, which determines the quality of the finished product to a considerable extent, also merits particular attention. A group of specific criteria should be delineated along with conventional ones of precision, reliability, longevity and the like: 1) the technological feasibility of the technical device, i.e., the possibility of producing it conveniently and economically; 2) the ergonomic nature of the equipment, i.e., the optimal correlation of its assemblies to the psychological attributes of the worker, the assurance of complete safety, optimal upkeep and the features of labor processes; 3) a high level of standardization of parts and assemblies, guaranteeing convenience in assembly, operation and repair; 4) repairability, i.e., the creation of

designs in which each assembly is convenient for removal and replacement; and 5) the ecological cleanliness of the equipment and its equipping with all of the essential cleaning devices supporting the preservation of the environment.

The fact that metals-intensiveness is markedly higher in domestic machine building than in other developed countries is connected both with the specific features of the designs and (to the greatest extent) with the prevailing selection of rolled metals supplied by our metallurgy. Metallurgy and its interaction with the metals-consuming sectors plays a key role in improving the operation of machine building. In 1986 rolled sheet metal comprised just 35 percent of all finished rolled metal in the USSR compared to 65-75 percent in the United States and Japan, while the share of cold-rolled sheet was just 7.4 percent of all rolled metal, or 22 percent of all sheet metals [1, p 164].

This situation is leading to the significantly higher metals-intensiveness of domestic equipment, as well as increasing the need for metalworking equipment. The excessive utilization of castings and high-grade rolled metals is sharply increasing the production of shavings and, consequently, reducing the metals utilization factor. There are currently just 16 press-forging machines per 100 metalworking machine tools in the MWE inventory of machine building in the USSR compared to 24 in the United States [2, p 25].

A comprehensive approach is needed to reduce metals-intensiveness: the conversion of design elements of equipment to sheet and fine sheet; a sharp increase in sheet and fine sheet in the selection of rolled metals; a rise in the share of press-forging machinery in the MWE inventory; and, a corresponding re-orientation of the output of domestic machine-tool building.

Domestic metallurgy offers its customers about 4,000 standard shapes and sizes of rolled metals, while the West German concern of Klenker, which produces many times less metal than the USSR, offers 10,000. That is why scrap metal is increasing so much in the USSR. The natural attempts of metallurgists to limit the number of resettings of the powerful rolling mills at the gigantic metallurgical enterprises plays a large role in this.

A way out of the situation has been found in the United States, Japan and the countries of Western Europe: they are creating mini-plants that manufacture a wide range of light rolled metals. About 300 such plants are already operating there (and especially in the United States and Japan—over 60 in each) that satisfy the need for various shapes and sizes of rolled metals; there are as yet just 2 in the USSR.

Production "at home" and "for yourself" of a large—and frequently even an overwhelming—quantity of components for the products being produced is one of the chief features of the contemporary organization of production in the USSR. L.I. Brezhnev promised the 25th CPSU Congress to break the trend toward subsistence

economy. As is well known, this was not done, and the subsistence economy is growing. Almost all the production of fundamentally new technology (robots and GAPs) is created under the conditions of that economy in particular.

The conference on the use of chemicals that was held at the CPSU Central Committee in May 1988 cited the exceedingly topical task of the utmost development of "in-house" machine building in the chemical ministries. It seems that such a call will hardly work in favor of the use of chemicals. There is no need to prove that the management workers of those ministries know what technology they need, but have far from mastered the culture of machine-building production itself. The customers for the products are far from always competent to manufacture it. It is surprising that the management organs of machine building have not extracted any lessons from the sorry experience of transferring its coal sector to the purview of Minugleprom [Ministry of the Coal Industry].

The expensiveness of this "in-house" production under the conditions of contemporary price formation troubles no one. The calculations for machine tools manufactured in that manner are approved by higher organizations, and their cost is included in the cost of the products and then in the selling price of those products, i.e., all of the excessive spending of the subsistence economy in no way diminishes the indicators typifying the economics of the enterprise here. They are "consecrated" by Goskomtsen [State Committee on Prices].

The roots of the subsistence economy are to a certain extent of a historical nature—the creation of seats and centers of heavy industry during the years of the first five-year plans, the dispersal of major industrial centers during the war years, the insufficient development and reliability of transport and the like.

This practice is associated to no small extent with the slogan of I.V. Stalin: "Fight the lack of personal responsibility," i.e., have everything essential at hand to produce your own products. He felt that this would ease finding and punishing those guilty of the disruption of production, i.e., ensure the "readiness of targets" for repression. M.S. Gorbachev pointed out the historical roots of the subsistence economy in the national economy of the USSR in his speech at the June (1987) Plenum of the CPSU Central Committee.

The most important reasons for the "strength" of the subsistence economy are connected with deep-rooted shortcomings in industrial cooperation, systematic violations of the volumes and deadlines for deliveries and with a certain imbalance in plans. The subsistence economy is naturally a reliable and peaceful version. But the natural question arises of what this "peacefulness" and "reliability" cost the economy, what the price of them is to society.

The USSR, for example, has overtaken the United States and Japan in the annual production volume of robots

and GAPs. But this equipment required enormous expenditures of resources and is still not having the essential impact. Its quality does not correspond to contemporary standards and it needs many support personnel, and as a result a minuscule quantity of workers are freed up (or else none at all). Robots often do not resolve such important tasks as increasing the shift coefficient of equipment operation; their recoupment periods are measured in phenomenally long time periods.

The level of dissemination of the subsistence economy in the USSR has other more global results as well. This can be judged from the data cited above on the disposition of the inventory of metalworking equipment.

The lack of confidence of producers in the observance of delivery deadlines for essential materials, constituent items, etc., is eliciting yet another extremely grave consequence for the economy: enormous immobilized reserves of commodity and material assets, and first and foremost various capital goods at their customers. These reserves, per the situation at the end of 1986, totaled 162 billion rubles in industry compared to 116 billion in 1980 [1, p 627] and 63 billion in 1970—a growth of 2.6 times over 15 years [5, pp 91, 554]—while output volume over the same period grew by 2.15 times; in other words, the reserves totaled 16.8 rubles per 100 rubles of output in 1970 and 20.3 rubles in 1985. The increase in reserves per ruble of output was equal to 20.8 percent.

Reserves of commodity and material assets in the national economy overall were almost half a trillion rubles of immobilized capital goods and other material assets in 1986. These values and dynamics differ sharply from the analogous indicators for the United States.

The most urgent necessity of an immediate restructuring of the system of material and technical supply is obvious. The Japanese supply system of "just in time"<sup>2</sup> is of interest in this regard. The balanced nature of plans and the fine-tuning of the infrastructure, the state of which currently makes it necessary to create those reserves, is our most important task.

#### **Organizational Problems in Accelerating Production Processes**

A most important condition of a rise in the efficiency of modern production is the systematic improvement of its organization—the optimal combination of its human and material elements in time and space.

The duration of the production cycle (from startup to the output of finished product), its uninterrupted nature, the maximal utilization of process operations and the reduction of idle time between operations are all indicators typifying the level of production organization.

Suitable attention has not yet been paid to improving this cycle at the majority of machine-building plants. The proportionate share of process time in the overall

duration of it is in the teens, or frequently single digits, in percentage terms. This increases the volume of incomplete production, immobilizes considerable material and technical resources and reduces the turnaround time of working capital.

Accounting and analysis of the activity of the production cycle must be introduced into the system, and measures to reduce it developed and implemented. This work should be closely coordinated with steps to improve the organization of production—efficiencies and reductions in the length of routings of movements of raw materials, blanks, parts and items along with the elimination of all excess movements. Only after this will it be possible to move to the mechanization and automation of manual labor in transport and moving operations. A reduction in production times is part of a more general problem—a regard for the time factor in the process of production organization. Every hour's increase in the duration of the production cycle signifies the postponement of the entry into service of essential capital goods and, consequently, the under-receipt of products by society.

The process of renewal and replacement of worn-out and obsolete equipment has up to now proceeded very slowly in the USSR. The withdrawal of machinery and equipment (in fixed capital) totaled 2.5 percent for industry, including 2.0 percent in machine building, in 1980 [1, p 147], 2.5 and 2.3 percent in 1985 [1, p 124] and 3.1 and 3.0 percent in 1986 [1, p 151]. It is obvious that the rate of withdrawal has accelerated somewhat. Recall that the relative magnitude of withdrawal (in percent) in machine building over the indicated years was lower than for industry overall. The renewal of capacity in this leading sector of industry has lagged appreciably.

In 1981 President R. Reagan approved a law on accelerated depreciation of equipment according to which the time for writing off the principal body of it was set at 5 years. Losses from early write-offs could be covered at the expense of tax deductions. This practice requires interpretation apropos of our conditions.

The 27th CPSU Congress, as is well known, established that the norms for the withdrawal of equipment in industry should be increased to 5-6 percent in the 12th Five-Year Plan instead of 2.5 percent in 1985, and to 5.0-5.5 percent in machine building. The complexity of the situation is that according to the five-year plan, industry output should grow by 3.9-4.4 percent a year, including 7.0-7.5 percent in machine building and metalworking. If we proceed from the fact that output per unit of capacity will be stable, the annual supplementation of the inventory should reach 9-10 percent of the inventory on hand, and 12.5-13 percent in machine building.

Domestic machine-tool building produced 163,000 metal-cutting machine tools and 52,000 press-forging machines in 1986 [1, p 169], 215,000 units in all. The annual production volume of that equipment consequently comprises 5.5 percent of the MWE inventory

instead of the 12.5-13 percent essential for growth and renewal. An important conclusion arises from this: in order to realize the projected growth rates of inventory renewal and growth rates of machine-building production volume, each unit of the new generation (going to replace or increase the inventory) should be more efficient (more productive) than the equipment on hand it is replacing by at least 2-2.2 times with an obligatory reduction of the cost per unit impact. The achievement of such growth is clearly scarcely possible in the next decade. A considerable increase in impact with the observance of the indicated conditions is thus an undoubted requirement posed of each succeeding generation of technology.

I have described the principal components of a model of our machine building. It is namely in that sector that the interconnection and interaction of the material and technical base and the human factor act especially distinctly.

It seems that the foundation of the output of progressive and highly efficient technology is the specialized production of optimal functional assemblies of the equipment devised under conditions of high standards of machine-building production, each assembly of which is able to accomplish its functions in optimal fashion, and the skilled and careful combination of those assemblies. This requires a radical change in the approach to the problems of production specialization, the consistent restriction of the subsistence economy and a significant rise in requirements toward the human factor—the training and cultivation of the personnel.

#### Bibliography

1. The National Economy of the USSR Over 70 Years: Anniversary Statistical Yearbook.—Moscow: Finansy i Statistika Publishing House, 1987.
2. Kheynman S., Resource Conservation—At the Foundation of Management. PLANOVYE KHOZYAYSTVO. 1988, No 10.
3. American Machinist. 1983, No 11.
4. Annual Survey of Manufactures. Washington, 1984.
5. National Economy of the USSR in 1985: Statistical Yearbook. Moscow: Finansy i Statistika Publishing House, 1986.

#### Footnotes

1. According to the author's calculations, the output of trucks for the whole group of sectors in the truck industry is currently 3 units per worker in the USSR and 12 in the United States, and the capacity of the vehicles in the United States is moreover greater.
2. This system signifies that all items of material and technical supply are delivered directly to the workstation precisely at the time they should be installed on the item being manufactured.

COPYRIGHT: Izdatelstvo "Nauka", "Ekonomika i matematicheskiye metody", 1989

## RAIL SYSTEMS

### Railway Communications Installation Detailed

*18290254 Moscow TRANSPORTNOYE STROITELSTVO in Russian No 7, Jul 89 pp 11-12*

[Article by N. S. Shilling, chief engineer of the Transsvyazstroy Trust: "To Improve Railway Communications"]

[Text] The Transsvyazstroy Trust's program for improving the subsector's technical level is one of the integral parts of the overall goal-oriented program for the attainment of the highest world technical level in transport construction for 1988-1990 and until the year 2000 of the USSR Ministry of Transport Construction.

The trust's program is based on the directions adopted by the USSR Ministry of Railways for the retooling and modernization of railroads, including in the area of improving the railway communications network. These directions envisage annually putting into operation up to 1,000 km of fiber-optic communication lines in 1991-1995, and up to 2,000 km in 1996-2000, and building no less than 40,000 km of main communication lines on new electric cables.

For a successful performance of these operations the Transsvyazstroy Trust should prepare itself in a comparatively short time interval for the construction of fundamentally new means of communication and execute them on a high technical level.

For now the integral indicator of technical level in the construction of communications systems in the trust comprises 0.61 of the world level (construction of fiber-optic communication lines, 0.4 and of electric communication lines, 0.82).

In the area of construction of railway communications systems we will have to master the technology of construction of fiber-optic communication lines and to develop and introduce new design and technological solutions for modern systems of combination cables for railway communications and digital transmission systems.

Total capital investments for the establishment of the material and technical base for the construction of new communications systems on the highest technical level for the period from 1988 until the year 2000 total approximately 1,830,000 rubles, of which 1,300,000 rubles should be realized before 1995.

From 1988 through 1995 it is envisaged developing and introducing into building production new machines for laying fiber-optic communication lines and electric railway communications cables and mastering advanced installation technologies. Fiber-optic communications engineering ensures high technical and economic efficiency owing to the transmission of a big flow of information and a high degree of protection against external

electromagnetic interference. A small size and not a big weight are important advantages of this system. Scarce metals—copper, lead, and aluminum—are not needed for their execution. According to an expert evaluation by specialists of the Ministry of Communications, the effect from the introduction of fiber-optic systems at the initial stage alone will be dozens of times bigger than from electric systems.

The introduction of digital transmission systems is another promising direction in the improvement in railway communications. Digital systems with high parameters of channels and reliability and quality of transmissions are characterized by a fully acceptable cost of equipment, as well as by a reduction of operating expenditures, which is attained owing to automated technical servicing and the availability of effective means of controlling equipment operation. The development of these communications cables has already begun.

Existing cable laying mechanisms and installation technologies cannot be applied in the construction of fiber-optic and cable lines for digital transmission systems. Fundamentally new mechanisms, new installation techniques, new measurement methods, and new electric measuring apparatus are needed. In this connection the program for the attainment of the highest technical level of the USSR Ministry of Transport Construction envisages the development and introduction of a self-propelled universal machine for laying fiber-optic and new makeups of electric railway communications cables on the basis of the T-130 tractor. The latter must have a system for drawing a fiber-optic cable, a device for reeling out a cable drum, a mechanism for an emergency stoppage of a cable layer in case of an excess of the permissible stress on a cable when it is reeled out, and a special channel in the system of cable laying equipment ensuring the preservation of protective cable and glass conductor covers. All this has been taken into consideration by the developers of the new SSKTB machine of the Main Administration for the Construction of Communications Facilities of the USSR Ministry of Communications, the Transstroymash Scientific Production Association, and TsNIIS [Central Scientific Research Institute of Transport Construction] of the USSR Ministry of Transport Construction.

For laying electric communications cables the program of the Ministry of Transport Construction also envisages the development of a new rail cable layer with a device for closing a slit in a roadbed. As compared with the preceding model of the rail cable layer, the new machine developed by the Transstroymash Scientific Production Association will be more productive and create comfortable conditions for service personnel. Plans have been made to begin the series production of fiber-optic and rail cable layers in 1991.

The utilization of the experience available to other ministries and departments will contribute to the mastering of advanced technologies of installation and electric measurements of fiber-optic cables and cables for

digital transmission systems. For example, the study and mastering of the technology of welding glass fiber-light conductors and of the system of necessary measures are based on the experience of the Ministry of Communications. The Transsvyazstroy Trust has begun systematic work on mastering the technology of construction of such main lines. The necessary normative technological literature has been acquired, the training of specialists is being carried out, and problems of acquiring installation tools and welding, monitoring, and testing equipment are being solved.

There is already some practical experience in laying a fiber-optic communications cable at the Leningrad-Mga-Volkhovstroy section, which is 112 km long. In 1990 the trust will begin the study and mastering of the technology of laying and installing cables for digital transmission systems. In the construction of these main lines the use of advanced technological methods is envisaged: welding of aluminum sheathings with the application of explosion energy, electromagnetic pulse, molding, and thermally shrinkable products for the restoration of hose coatings. These highly effective technologies have proved their value both in construction and in operation. However, the decisions of the USSR Ministry of Railways adopted in thematic charts for the development of a balanced combination signaling-centralizing-blocking and communications cable and a balanced cable for digital transmission systems rule out the possibility of their mechanized laying and application of the technologies enumerated above during installation.

The fact that cable operating conditions have not been taken into account is a serious omission. As a result, the use of an aluminum sheathing with a radial thickness one-half that of an ordinary one and with a longitudinal weld and of thinner shielded and protective armored tapes was permitted and the thickness of a protective polyethylene hose was reduced.

The trust set forth its disagreement with the recommendations in letters to the client and developer of these types of cables. Along with the trust's extensive application of welding with the use of explosion energy, the technology of welding together aluminum sheathings as a result of magnetic pulse continues to be improved. With the transfer of the technology of installing cables in aluminum sheathings from soldering to welding the further application of gas-proof junction boxes in lead casing is not advisable.

Therefore, in 1986-1988 the trust replaced lead gas-proof junction boxes with gas-proof ones in aluminum casing with the application of a hermetically sealing plug made from the Elast glue polyurethane compound. This made it possible to weld aluminum sheathings not only in the trunk of the main cable, but also in its branches.

The application of the welding of all elements in main cable lines under construction was made on an experimental basis at a number of railroad sections.

At present in cooperation with VNIIproyekttelektromontazh of the USSR Ministry of Installation and Special Construction Work and TsNIIS of the Ministry of Transport Construction the Transsvyazstroy Trust is mastering a new technology of manufacturing gas-proof junction boxes with the application of the Vljad-13 polyurethane compound. Apparently, preference will be given to the latter, because it is twice as effective as the technology of manufacturing an aluminum gas-proof junction box with the application of Elast.

A rise in the technical level in the construction of communications systems will largely depend not only on the application of new machines, mechanisms, and advanced technology, but also on the conditions under which they will be applied and with what means of labor they will be executed. Working conditions also largely determine quality—one of the key indicators of the technical level.

Work with fiber-optic cables and with cables for digital transmission systems will require the application of single-design welding, electric measuring, and control apparatus, which has a high cost and requires special conditions for its transportation, use, and storage.

In connection with this it is necessary to establish mobile field installation and measuring laboratories, mobile units for magnetic-pulse welding apparatus, and short-term mobile warehouses for the storage of explosives. There is the task of developing, organizing the manufacture of, or purchasing the necessary highly productive and high-quality installation tools.

The fulfillment of the "Mirovoy Uroven" [World Level] Program is inconceivable without the establishment of close business relations with sectorial and higher educational institution science. Many ministries and departments take part in the implementation of the outlined measures. The Soyuzheldoravtomatizatsiya Scientific Production Association and the Main Administration of Signals, Communications, and Computer Technology of the Ministry of Railways act as developers and clients of new systems of combination cables and cables for digital transmission systems. The responsibility for manufacturing new cable laying mechanisms has been placed on TsNIIS and the Transstroymash Scientific Production Association of the USSR Ministry of Transport Construction and on the specialized design bureau of the Main Administration for the Construction of Communications Facilities of the USSR Ministry of Communications. The USSR Ministry of Installation and Special Construction Work and the USSR Ministry of Communications participate in the mastering of advanced methods of laying and installing fiber-optic communications cables. The USSR Ministry of the Electrical Equipment Industry and the USSR Ministry of the Communications Equipment Industry have been included in the program as manufacturers of fiber-optic cables and cables for digital transmission systems, as well as developers and manufacturers of the necessary welding and monitoring-testing equipment and installation tools. The

USSR Ministry of the Chemical Industry, the USSR Ministry of Installation and Special Construction Work, and the USSR Ministry of Medium Machine Building act as developers of the technology and manufacturers of new polyurethane compounds and thermally shrinkable products for the restoration of protective hose coatings on fiber-optic and electric communications cables. The Kiev Institute of Welding imeni Ye. O. Paton and the Leningrad All-Union Planning and Design Institute of Electrotechnical Production Technology will have to develop the technology of magnetic-pulse welding of aluminum communications cable sheathings and to manufacture welding equipment. This is not the complete list of all the participants in the program.

At present the construction of cable communication lines on electric cables is carried out on a higher technical level (the integral indicator comprises 0.8 of the world level) and the technology of joining aluminum sheathings with the application of welding surpasses foreign technologies.

The program envisages measures for improving the operating qualities of main cable lines owing to the application of thermally shrinkable products, including shaped ones, and the use of new polyurethane glue compounds. Various protective cable coatings against soil and electric corrosion should play an important role.

The trust's program for scientific and technical progress and the attainment of the highest technical level was approved in July 1988 by the trust's labor collective council and is one of the basic directions in the collective's activity.

Contracts with scientific research, experimental design, and other organizations and enterprises for the amount of more than 200,000 rubles have already been concluded and a correction of the trust's own program for 1989 envisaging the performance of new operations for the amount of about 500,000 rubles has been made.

COPYRIGHT: "Transportnoye stroitelstvo", 1989

22161

187

NTIS  
ATTN: PROCESS 103  
5285 PORT ROYAL RD  
SPRINGFIELD, VA

22161

This is a U.S. Government publication. It contains the policies, views, or attitudes of the U.S. Government. Users of this publication may cite FBIS or JPRS provided they do so in a manner clearly identifying them as the secondary source.

Foreign Broadcast Information Service (FBIS) and Joint Publications Research Service (JPRS) publications contain political, economic, military, and sociological news, commentary, and other information, as well as scientific and technical data and reports. All information has been obtained from foreign radio and television broadcasts, news agency transmissions, newspapers, books, and periodicals. Items generally are processed from the first or best available source; it should not be inferred that they have been disseminated only in the medium, in the language, or to the area indicated. Items from foreign language sources are translated; those from English-language sources are transcribed, with personal and place names rendered in accordance with FBIS transliteration style.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by FBIS/JPRS. Processing indicators such as [Text] or [Excerpts] in the first line of each item indicate how the information was processed from the original. Unfamiliar names rendered phonetically are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear from the original source but have been supplied as appropriate to the context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by the source. Passages in boldface or italics are as published.

#### SUBSCRIPTION/PROCUREMENT INFORMATION

The FBIS DAILY REPORT contains current news and information and is published Monday through Friday in eight volumes: China, East Europe, Soviet Union, East Asia, Near East & South Asia, Sub-Saharan Africa, Latin America, and West Europe. Supplements to the DAILY REPORTS may also be available periodically and will be distributed to regular DAILY REPORT subscribers. JPRS publications, which include approximately 50 regional, worldwide, and topical reports, generally contain less time-sensitive information and are published periodically.

Current DAILY REPORTS and JPRS publications are listed in *Government Reports Announcements* issued semimonthly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161 and the *Monthly Catalog of U.S. Government Publications* issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The public may subscribe to either hardcover or microfiche versions of the DAILY REPORTS and JPRS publications through NTIS at the above address or by calling (703) 487-4630. Subscription rates will be

provided by NTIS upon request. Subscriptions are available outside the United States from NTIS or appointed foreign dealers. New subscribers should expect a 30-day delay in receipt of the first issue.

U.S. Government offices may obtain subscriptions to the DAILY REPORTS or JPRS publications (hardcover or microfiche) at no charge through their sponsoring organizations. For additional information or assistance, call FBIS, (202) 338-6735, or write to P.O. Box 2604, Washington, D.C. 20013. Department of Defense consumers are required to submit requests through appropriate command validation channels to DIA, RTS-2C, Washington, D.C. 20301. (Telephone: (202) 373-3771, Autovon: 243-3771.)

Back issues or single copies of the DAILY REPORTS and JPRS publications are not available. Both the DAILY REPORTS and the JPRS publications are on file for public reference at the Library of Congress and at many Federal Depository Libraries. Reference copies may also be seen at many public and university libraries throughout the United States.